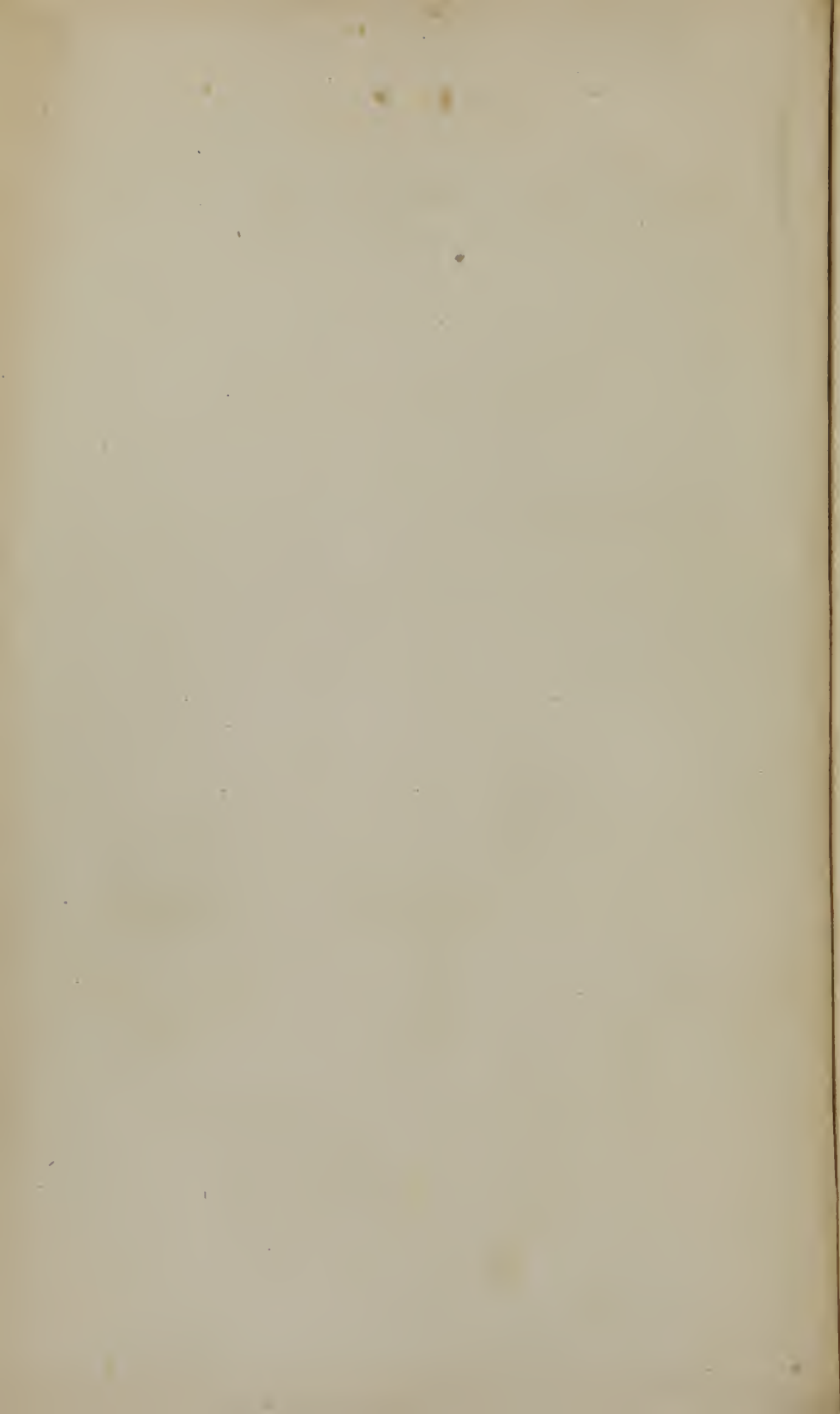


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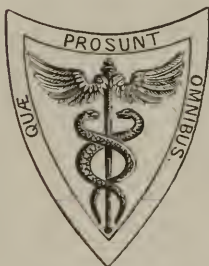
LECTURES
ON THE
MORE IMPORTANT DISEASES
OF THE
THORACIC
AND
ABDOMINAL VISCERA.

DELIVERED IN THE UNIVERSITY OF PENNSYLVANIA.

BY

N. CHAPMAN, M.D.

PROFESSOR OF THE THEORY AND PRACTICE OF MEDICINE,
ETC. ETC.



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TO
JOHN BROCKENBROUGH, M.D.,
OF
RICHMOND, VIRGINIA,

THIS WORK

IS INSCRIBED,
WITH EVERY SENTIMENT OF PROFOUND RESPECT,
AND AFFECTIONATE ATTACHMENT.

N. CHAPMAN.

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P R E F A C E .

ESSENTIALLY does this work consist of Lectures, which have been publicly delivered. Taught the utter impossibility of treating fully of the *Theory* and *Practice of Medicine* within the period allotted by the statute of our school, it occurred to me that I might improve the course of instruction entrusted to my charge, by the publication of this portion of it, thereby securing sufficient time for the consideration of other and important subjects. But, though the desire of benefiting my class has principally determined this measure, it is not to be concealed that I was also in some degree actuated to it by the hope, that, on account of the wide prevalence through our country of most of the diseases embraced in the work, I might probably, by its circulation, render a more general service. It may be proper, further, to state, that some of the articles which it contains have previously appeared in one or more of our medical journals. These, however, being out of print, and now presented very much enlarged, by additional matter, or otherwise altered, I thought a republication of them admissible.

That the work comes forth with one disadvantage, I am aware. As a fragment of a course of Lectures, it is deprived of numerous facts or discussions, theoretical or practical, illustrative or exegetical, distributed under other heads, which could not have been displaced and concentrated in it, without a rude violation of the integrity of my plan, and injustice to the entire undertaking.

Nevertheless, I trust that the work does not suffer materially in this respect—and, at all events, that, whatever the defect may be to others, it cannot be felt by my class, by whom the whole course is heard.

Philadelphia, February, 1844.

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PHTHISIS PULMONALIS,

OR

PULMONARY CONSUMPTION.

THIS is a disease, on the consideration of which, I enter with little satisfaction. The mere contemplation of it is calculated to create feelings very much the reverse. Known from the earliest times, and studied especially of late with unexampled diligence, and under every advantage, it still proves as intractable in the management, as at the very dawn of medical science. Being fully established, I doubt whether a cure was ever effected of it. Not an instance at least, have I seen, and believe, that those who report to the contrary, deceive themselves, or the truth is not in them. Efforts directed by talent and learning and patient industry, have been rewarded by little success of any value. They have revealed its morbid anatomy, without advancing in any degree our control over it.

No climate or section of the world is exempt from the disease. Everywhere it is found more or less, and in certain countries, including our own, its ravages are terrible. The young and the old—the high and the low—males and females, are in common its victims. But it seems to fall with malignant delight most heavily on those endowed with the temperament of genius, and at the early season of bloom and promise. These reflections, while awakening other emotions, cannot fail to humiliate our professional pride, and give a distaste to the subject—not, however, I trust, to its abandonment in despair, or even to an abatement of exertions to improve our skill and resources.

In its strict etymological sense, the term *phthisis*, signifies *destruction* or *decay*, and applied to a pulmonary affection, denotes

according to the usual acceptation, consumption or wasting, to extreme emaciation and exhaustion, from an ulcerated state of the lungs.

Every one, till very lately, who has treated of this disease, with hardly one exception, considers ulceration so constant a concomitant on it, as to make it an essential ingredient in the definition. Cullen tells us, that it is "emaciation and debility of body, with cough, hectic fever, and a copious expectoration of pus." He here insinuates the existence of an ulcer, and which clearly appears in the subsequent description of the disease. Even Abercrombie, a much later authority, with all the lights which he might have commanded, retains this feature in the definition of it.* Bayle, in his celebrated work on the subject, has laid it down, "that every organic affection of the lungs, which left to itself, produces in them progressive disorganization, succeeded by *ulceration*, and finally by death, ought to be considered as *Phthisis Pulmonalis*."

It is not my intention to deliver any formal criticism on any of these definitions. As equally applicable to the whole, it may be affirmed, that they are erroneous in assuming the presence of an ulcer. Not to insist now on the distinction between an ulcer and a tubercular excavation, the latter only belonging to genuine phthisis, surely, it must be conceded, that cases of the disease do arise, run their course, and end fatally, without the occurrence of either of such lesions. The definition of Bayle strikes me also, as exceptionable, as well in excluding all diseases in which this ulcerative disorganization does not exist, however much they may resemble consumption in other respects, as in including all incurable or mortal disorganizations, different as they may be from it in their nature and symptoms.

Laennec, without any explicit definition, seems to view the disease as dependent only on a species of *accidental* production in the lungs, to which modern anatomists have restricted the name of *tubercle*,—a term formerly applied to every small preternatural protuberance as the diminutive of the Latin word *tuber*, or in English tumour. This, he thinks, is the only kind of phthisis which we should admit, unless, indeed, it be the phthisis nervosa, and the chronic catarrh, simulating tubercular phthisis. In these

* Vide Essays in the Edinburgh Medical and Surgical Journal.

two affections however, I can discern no peculiar claims to such a position, and if they be admitted to it, we must on the same loose principle of arrangement, embrace chronic pleurisy, pneumonia, and indeed every other pulmonary organic lesion.

To a want of nosological precision, is to be ascribed the multiplied forms, and absurdly minute divisions of consumption, instituted by some of the authorities. Fourteen species are made by Portal—sixteen by Morton—twenty by Sauvages, and twenty-four by Demelet.

Not easy, is it, amidst such a multitude of analogous affections, to determine exactly what is really consumption. Limiting it as now appears to be done, to tubercular degenerations of the lungs, the inquiry immediately arises, are these always the same? and admitting this, which certainly we are not prepared to do in the present state of our knowledge, it might be demanded, why are other extraneous productions leading to similar consequences excluded? The morbid growths in the lungs, proceeding from depraved nutrition, are well known to be various, all tending to the disorganization of their structure, and essentially to the formation of what is called consumption. Granting that a cartilaginous, osseous, or calcareous deposit in these organs as well as the strumous affections of their lymphatic glands, which indeed cannot be denied, will induce the same sort of mischief, as that of tubercular matter, namely, a destructive lesion, and its effects, surely they have plausible claims to be thus designated, and embodied in the same classification.

But though in some degree, concurring in the views of Bayle, I shall still, not adopt his arrangement. Excepting a slight incidental notice of the morbid states deemed by him consumptive, it is to tubercular phthisis in its more precise and definite sense, that I mean to confine my observations. The varieties for which he contends, are confessed by him to be difficult of recognition during life,—and even if we could establish a less equivocal diagnosis, I am not aware that the treatment would be materially influenced. Nor does he conceal, that they are comparatively of rare occurrence, and for the most part connected with the tuberculous state of the lungs, in the just meaning of the term. Laennec, however, entertains a different view. "As to those species," says he, "described by Bayle under the title of granular, ulcerous, calculous, cancerous, and with melanosis,—the first, is a mere

variety of the tuberculous,—the second is the partial gangrene of the lungs; and the three others, are affections which have nothing in common with tubercular phthisis, except that they have their seat in the same organ.” The proportion, according to a table which Bayle has presented of nine hundred cases of consumption, examined *post-mortem*, is that of the miliary tubercular, there were six hundred and twenty-four,—of granular, one hundred and eighty-three,—of melanosis, seventy-two,—of ulcerous, fourteen,—of calculous, four—and of cancerous, three examples—and nearly the whole being more or less blended with ordinary tubercles. Be this, however, as it may, the title phthisis *pulmonalis* is exceptionable, as leading to a very narrow and imperfect idea of the disease. Taking tubercles as its only cause, which seems to be the doctrine of the day, we shall hereafter see that these so far from being restricted to the lungs, are incident to every organ and structure of the body in various proportions,—sometimes greater than in the lungs themselves; and committing correspondent ravages. It is obvious, therefore, that some designation should be adopted, sufficiently comprehensive to express this group of diversified and complicated affections. For the present, I am not aware that we can do better than to recur to the old epithets, pulmonary, laryngeal, tracheal, gastric, enteric, hepatic, splenal, renal, uterine, &c., formerly used to denote the lesion, when predominant in any one organ. But so wide a survey of the subject, I do not mean, and must be content with some incidental allusions to these divisions, in order to concentrate my view on the first and principal form of the disease.

Contemplated in its restriction to the lungs, it varies much in its modes of aggression, and its progress through its several stages. In a formal disquisition on it, these diversities, so interesting in many respects, should be pointed out and detailed. Confined, however, as I am, necessarily, to a narrow space, I can present only a mere summary of its more ordinary character and aspects, leaving those who are desirous of ampler information, to consult the elaborate treatises on it, which have recently appeared.

An attack of phthisis, with some preliminary indications, commences, for the most part, with a short, dry, diminutive cough, rather tickling than violent, termed *tussicula*, without dyspnœa, except after exercise, or other exertion—and though very constant, it brings up only a little glairy or pituitous matter, or frothy

mucus, apparently coming from the fauces, of a saltish taste. Towards evening, more especially, chilly sensations occur, followed by a slight febrile movement, with flushing in rather one than both cheeks, and burning in the palms of the hands, and sometimes soles of the feet. In the interval of these exacerbations, the cutaneous surface is harsh and unperspirable—pallid or dingy, and cool,—the countenance previously somewhat peculiar, being still further changed. Commonly the appetite is keen; the digestive powers unimpaired; and the alvine, and urinary functions not appreciably wrong. Nevertheless, the pulse is usually accelerated, and muscular weakness, and general langour, are experienced, though there is gaiety of spirits, or at least an absence of moping or querulousness. With trivial deviations, as regards the regularity of the paroxysm, in the observance of the law of periodicity, this state may continue for a very indefinite period, weeks, months, or years.

The disease approaches in other ways, one of which is, with hæmoptysis, very slight or exceedingly copious, preceded in many instances, by little or no admonition—sometimes, indeed, apparently with exuberant health, soon followed, however, by a train of the characteristics of phthisis. This is the most frequent of its modes of origination according to some of the recent writers. Louis states, that, in two-thirds of nineteen hundred and sixty cases observed by him, the attack was thus introduced. But, though such an immense proportion does not at all correspond with my own, or as I am induced to believe, with common experience, rather than impeach his accuracy, which I am reluctant to do, as regards statistical reports, I would ascribe this difference to some peculiar hæmorrhagic tendency in the patients of the hospital, whence he derived the data on which his estimates were formed.

Cases there are, too, where the earliest intimation of the disease is soreness of the throat, or tenderness of the larynx, or both united, with scarcely any thing else to excite solicitude, except, perhaps, a hacking or worrying cough, with deficient sputa, brought up more by a seriatric than tussicular effort. Further, it is occasionally observed in the commencement, and, indeed, for some length of time, imitating so closely dyspepsia, as to be mistaken for that affection, or counterfeiting with equal exactness, the lesions of other of the abdominal viscera, mostly of the uterus and liver,

as to lead to no less deception. Thus simulated, masked, or disguised, it may be kept under by the prepotency of these affections, till it approaches maturity, and then, burst forth in all its horrors.

Not unfrequently, moreover, its invasion is in the semblance of acute catarrh or pleurisy, or pneumony—progressively sliding, as it were, into phthisis, or as primary chronic states of these affections, having a similar tendency and aspect. The former are very apt to advance rapidly, and mostly constitute what is vulgarly called *galloping*, and with more propriety, acute consumption.

But independent of any adventitious concealment, I have known phthisis to arise, and run its course, free from hæmorrhage, pain, or uneasiness in any part of the chest, or difficulty of respiration, or cough, or vitiated expectoration, or any notable change in the circulation to the final stage, when the disease became unequivocally developed by the occurrence of most, or all of its proper or ordinary symptoms. Nay, I once attended a lady in consultation with the late Professor Physick, who came to this city with protracted diarrhœa, in whom the first intimation of phthisis was the rupture of a vomica—and have witnessed the dissection of a man supposed to have died of marasmus, where tubercular lesions of the lungs were only presented. These are denominated latent cases.

Let its approach, however, be as it may, the disease mostly, when established, steadily advances, exhibiting as it unfolds itself, more or less of those modifications induced by its mode of origin, or by age, sex, or constitutional idiosyncracies or conditions. Now it is, that thoracic pain usually in the side, extending to the shoulder, is complained of,—the breathing becomes short, panting, and oppressed,—the cough incessantly teasing,—the occasional, evening or nocturnal chills severer; succeeded by fever of greater intensity, and more copious perspiration. Henceforward, may be perceived, with a regular increase of debility, a corresponding wasting of flesh—what remains, being soft and flabby, and of a deadly pallor, the face particularly so, except during the febrile paroxysm, when the cheeks are flushed. The peculiarity of countenance formerly alluded to, is also further developed,—the nose pointed, the alæ contracted,—the cheek bones prominent—the space beneath sunken, the eyes bright, and the lips flrid.

Exceedingly diversified are the sputa, at this and subsequent periods. As in the beginning, they may continue thin and glairy, or become more viscid and glutinous—and losing their pellucidity, acquire an opaque or greenish hue, intermixed with streaks of yellow matter, or small flakes of softened tubercle, or matter resembling boiled rice, of different colours, though generally white: or they may be mucous or mucoid, or puriform or purulent, sometimes charged with the dark matter of melanosis, or calculous concretions,—inodorous or very fetid; tinged or not with blood, or the effusion of the latter is so copious as to amount to hæmorrhage. But, perhaps, the most common appearance ultimately is, that of dabs of a tough, tenacious, fibrinous consistence, of a whitish, grayish or yellowish complexion,—and of a floccular or woolly surface, so solid and weighty, that they generally sink in water.

The pulse which had been small, quick, and irritated, now is usually hard and greatly accelerated, denoting the existence of inflammation, and soon afterwards hectic fever in various degrees of regularity, more distinctly shows itself.

. It is not necessary for me to dwell on the history of this species of febrile affection, or to note in detail, the train of melancholy consequences, of which it is productive. My object will, perhaps, be sufficiently answered, by remarking, that it is observant of the law of periodicity, the paroxysms, at first, mostly occurring early in the evening,—sometimes again at noon, preceded by a chill, or not, and ending in profuse perspiration. There are instances, indeed, where it imitates all the types of simple or complicated intermittents, in their duplications and triplications, or other anomalies,—and, on other occasions, it is converted into a continued irritative fever, with scarcely any appreciable remissions or exacerbations. Being, however, once fully confirmed, in any shape, extreme debility and emaciation are henceforward induced by the united operation and wasteful influence of the fever, colliquative diarrhœa, and sweats, till finally, as has been said, the patient presents the hideous spectacle of an animated skeleton.

In his delineation of the effects of famine on the human frame, a poet of antiquity has presented a picture in many of its features equally applicable to the ravages of this fell disease:—

Cava lumina: pallor in ore:

Labra incana situ: scabri rubigine et dentes:

Dura cutis, per quam spectari viscera possent:
 Ossa sub incurvis exstabant arida lumbis:
 Ventris erat pro ventre locus: pendere putares
 Pectus, et a spinæ tantummodo crate teneri.
 Auxerat articulos macies, genuumque rigebat
 Orbis, et immodico prodibant tubere tali."

Ovid Metamor. lib. viii. ver. 801.

Contemplated at its advanced stage, we shall find the countenance totally altered, chiefly by an exaggeration of the state already mentioned. The cheeks are more hollow, though the bones are prominent,—the skin arid,—the nose sharpened and drawn,—the eyes sunken, with the adnata of a pearl colour, destitute of vascularity,—the lips retracted, so as to produce a bitter smile,—and the hair thinned by falling out,—the neck wasted, oblique and somewhat rigid or immovable,—the shoulder blades projected or winged,—the ribs naked and exposed, with diminution of the intercostal spaces,—and the thorax apparently narrowed; the abdomen flat,—the joints great and small, seemingly enlarged from the wasting of the integuments,—the nails livid, and occasionally incurvated,—the extremities œdematous; the angular points of the bones on which the body rests, in several parts protruded through the skin,—the whole attended by a most afflicting cough, aphthæ, sore throat, difficult deglutition,—feeble, whispering voice, or an entire extinction of it. Even, however, in this sad and reduced condition, the patient, often heedless of the admonitions of approaching death, and sometimes in the entire possession of his intellectual faculties, continues till the last, full of hope and confidence of ultimate recovery.

There are, however, some deviations in this respect. Towards the close of the case, the brain occasionally becomes affected, marked by very acute headache, especially with the rise of fever, and often by delirium,—and I have seen repeatedly, a gradual weakening of the mind till considerable imbecility was induced,—while in other instances, from the beginning to the conclusion, with a just appreciation of the situation, the inevitable destiny has been met firmly from a pious resignation to the will of God.

The duration of the disease, it appears, is very indefinite. Cases are reported by Portal, Bayle, and Louis, which ended in from eleven to twenty-five days, and others, that were protracted to forty, and even fifty years. Of the former, I have

seen no such remarkable examples, though often of a very few months continuance. My experience of the latter supplies me with two cases, which there is strong reason to believe endured nearly as long, and now I have under my care a third, that I know has existed for more than half this period. The average duration of the disease according to the hospital reports of Bayle, Andral, and Louis, is about two years. But with the comforts and other advantages of private life, it must be still longer,—though under the most favourable circumstances, a considerable portion of instances terminate within the year, or even much less time.

Tubercles being the immediate cause of that form of phthisis to which my inquiry is mainly directed, it seems proper before we proceed further into the etiology of the disease, to give some account of their nature, and mode of production. As the name imports, these are protuberant indurated nodules in the lungs, especially in the upper and posterior part of the right lung according to Laennec, in the latter part of which statement, Louis differs, who says, that of thirty-eight cases, he found in two-thirds, the left lung affected. But it is seldom that either lung escapes.* The proper situation of tubercles is the cellular tissue, in which they are so embedded, as not to be detached without removing a portion of the tissue. Carswell, however, has lately maintained, that their proper location is in the mucous lining of the bronchi and air-cells. No doubt they may occasionally occupy these positions, or, indeed, every integral portion of the lung, there being no texture incapable of their generation and support. Evidence, indeed, is not wanting of a separate existence, or coincidence of them throughout the entire pulmonary structure in substance and membranes. "They are produced indifferently," says Andral, "in the last of the bronchi, or in the vesicles which succeed them, or the cellular tissue interposed between the latter, or in the interlobular cellular tissue," and he might have added, in the pleura.

Tubercles are of a gray-yellowish colour, and semi-transparent, of a firm consistence, and as we were long ago told by Starke,

* Tubercles, says Louis, are almost always found in both lungs. I have seen them confined to the left lung only five times, and to the right twice. Both lungs, however, are seldom equally affected by them.

wholly inorganic. No blood-vessels, according to him, can at least, be traced in them, even by a microscope, and they are impervious to the finest injection. Of the size usually of millet seed, they are hence called miliary tubercles, though some of them are often of much greater dimensions, even to those of a large nut, and uniting in clusters, which they are apt to do, are then denominated conglomerated tubercles.

Differing from them chiefly, in the uniformity of their size, which is also that of the millet seed—in being round or ovoid, and always transparent, as well as existing in vast numbers separate and distinct, without ever coalescing in groups, like the former, and having a harder and more gritty character, a variety of tubercle is also occasionally to be met with, called granular.

Bayle, by whom these were first described, considers them as peculiar, or of a very dissimilar nature to genuine tubercles, caused by an accidental deposit of cartilaginous matter, opposed in this respect to Laennec, who holds the two productions to be essentially the same. As in most controversies, authorities are here arrayed on each side, and while Chomel supports the former, Louis lends his testimony to the latter. It is not a point on which I dare venture a positive opinion,—though, I confess from a review of all that has been said, I am inclined to believe, that there is really a distinction. Differing, however, from both, Andral denies altogether their tubercular character, and seems to view them pretty much in the same light as the granulations of pneumonia, in its several grades of hepatization, arising in a similar manner from common inflammation, passing through the several changes; though finally assuming a greater degree of induration. Examining the evidence he has adduced, it will be found that this hypothesis is very strongly sustained. Yet, it is defective in not accounting for the peculiarities of the degeneration. Taking as a basis the existence of the tubercular diathesis, by which the action of the causes of inflammation is modified, I think we are supplied with a satisfactory explanation of the problem. These granular appearances, in a word, are to be regarded as tuberculoid, and not genuine tubercular productions.

Tubercular matter, however, does not invariably assume a definite figure. It is sometimes in patches, as a deposit in the cellular texture, of the same consistence and colour as the ordinary tubercular formations, and is then termed tubercular infil-

tration, it being a state not altogether unlike the indurated gray hepatization of the ultimate stage of pneumonia.

Excepting by Bayle, who maintains the contrary, it seems to be admitted, that consumption prevails mostly among females, in the proportion of one-fourth more according to some statistical calculations, with a propensity to show itself about the season of puberty,—though oftener absolutely evolved at a somewhat later period. Nevertheless, it affects all ages, even the fœtus in utero, or, at least, tubercles have been several times observed in the lungs, under such circumstances. Not unfrequently does it occur in children within the year, or a little more advanced—and persons upwards of eighty, have fallen victims to a sudden development of it. But we are told by Hippocrates, that the largest number of cases is manifested between eighteen and thirty-five years, and which estimate, is substantially confirmed by subsequent, and perhaps, better conducted inquiries.*

As a leading, remote, or predisponent cause, the period of life is, therefore, to be considered. More operative, however, to tubercular origination, is a strumous diathesis thought to be. But by the adoption of this hypothesis, the difficulty as to the production of the disease, is scarcely lessened—since the nature of scrofula itself, is wrapt in nearly equal obscurity. The term serves only to express a pravity of system, presenting infinite modifications, of the essence of which we are possessed, at most, of some plausible conjectures, as substitutes for definite and well ascertained information.

It is, however, declared, that the predisposition of the disease, is frequently connected with a peculiar constitution of the body,

* The annexed tables taken from Bayle and Louis, give the proportions very precisely; by the former one hundred, and by the latter, of one hundred and twenty-three cases.

TABLE BY BAYLE.

<i>Ages.</i>	<i>Deaths.</i>
From 15 to 20	10
20 " 30	23
30 " 40	23
40 " 50	21
50 " 60	15
60 " 70	8

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TABLE BY LOUIS.

<i>Ages.</i>	<i>Deaths.</i>
From 15 to 20	11
20 " 30	39
30 " 40	33
40 " 50	23
50 " 60	12
60 " 70	5

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evinced by delicacy of complexion—light hair—blue eyes—with large pupils; thinness of skin; prominent veins; tumid upper lip; and in short, with all the other evidence of the scrofulous habit.

Not prepared at present to deny positively the strumous origin of tubercles, I am, however, very strongly inclined in opposition to general authority, to maintain their independence of such condition, and at all events, if it be so, the identity of the two productions. Degenerations of the kind are various, proceeding from diverse modifications of the nutrient process,—and though having a resemblance, are really as specifically different from each other, as are the arthritic, scorbutic, cancerous, venereal, mercurial, or calculous states. Yet, there is a diathesis so constantly leading to phthisis, that it may with propriety be singled out and distinguished by the term tubercular.

Contrasted with the scrofulous, it is in the first place, to be stated, that with little of the external physiognomy appertaining to that state, it has its own peculiar physical structure and aspect, among the features of which, are the long delicate neck—narrow, flat chest; prominent shoulders—high cheek bones—long arms—large hands and feet—dark hair and eyes, with lengthened and tapering lashes,—thick skin, and dingy complexion.

They also differ in some particulars, in the moral and intellectual constitution with which they are associated. As soon as the strumous habit becomes oppressed by an affection of the organs of the cavities, all vivacity is exchanged for gloom, petulance and querulousness. The tubercular, on the contrary, retains its original qualities throughout, in all stages, and in every fluctuation.

Further and material differences are recognizable in the two affections, the strumous being most prevalent in childhood, or youth, and the tubercular at adult or maturer age. The former too, assails both the internal and external structures, while the latter takes a centripetal direction only.

Nor is their mode of approach the same, or even bearing a close similitude. It is undeniable that scrofula in early life especially, nearly always, at first, betrays itself by disorder of the chylopoietic viscera; irregular appetite; bad digestion; vitiated alvine discharges; tumid abdomen, &c., all which may be relieved by a translation to the surface. Tubercular formations have no such signs, or in their progress ever manifest any disposition to metastasis, or change of position. But the great and irrecon-

cilable distinction between these affections, consists in tubercles being altogether an extraneous production, and strumous tumours, degenerations of lymphatic glands. The first is a new creation of an irregular nutrition, while the other is the diseased growth of a natural pre-existing organ.

The view presented, seems to be confirmed by the fact, of the wide spread of consumption, and the casual occurrence of scrofula only in many parts of the world. It is affirmed by the late Professor Rush, on the authority of Baron Humboldt, that such is the case, in a remarkable degree, in Mexico, which has been corroborated to me by a medical friend, who resided in that country for nearly twenty years. The same is no less true of Peru, and especially Lima, as I learn of a distinguished practitioner of that city, whose opportunities of observation were ample. Certain districts of India, I have understood, afford further illustrations of similar purport, and probably more proofs might be collected from other countries. It is, indeed, conspicuously so of our own. As prone to consumption as probably most parts of the world, scrofula is seldom or never generated among us;—the disease which we occasionally see, being chiefly in foreigners or their immediate descendants.

To this, I am aware, it has been replied, that though external scrofula is rarely to be met with in the regions designated, it may frequently attack internal structures, particularly the lungs, constituting consumption. It will be perceived, that this is merely hypothetical, and may be readily confuted. No event is less common than the strumous habit without some outward manifestation, and when thus existing internally, it is most apt to fix on the chylopoietic apparatus, inducing tabes mesenterica, and not on the pulmonary organs. Besides which, scrofula is removable by the spontaneous changes of the system, or by the interposition of art, and the tuberculous state, perhaps, never cured in either way.

Consumption, however, sometimes occurs without any of the physical signs usually incident to the strumous or tubercular diathesis. Examples of such exemptions are, perhaps, familiar to every practitioner, and some of the most remarkable of which have come under my own observation, extending to large families of children, the whole of whom, in the absence of every thing in the form of temperament to premonish it, have been

successively swept away, on attaining maturity, by this fatal disease. Three or four summers ago the survivor of twelve brothers, was at the springs of Virginia, labouring under consumption;—the others having previously died of it, all of whom grew up with robust frames and ostensibly sound constitutions. There is here a latent predisposition supposed to be owing to something in the condition of the lungs themselves, conferring what is usually called the pulmonary taint.

No doubt that this and every other form of phthisis, is transmitted as an inheritance, by a predisposition to it so exquisitely susceptible, as to be readily excited into positive disease by any of the ordinary circumstances;—and sometimes, without an appreciable cause. As in other hereditary distemperature, this affectability will occasionally overleap as it were, one generation, the parents entirely escaping, while their progeny, however numerous, shall be affected. Not to cite other instances to this purport, there was a family of thirteen children, of my acquaintance, each of whom, in succession, perished of consumption on reaching puberty, or thereabouts, whose father and mother lived to be nearly ninety years old, the grandfathar having attained a still greater longevity.

But though a congenital or hereditary propensity to tubercular formations may prevail, it is equally clear, that it is to be acquired. Curious as an investigation of the causes of this secondary predisposition may be, it is impossible that I should now attempt more than a mere sketch. As principally leading to this end, are assigned all those circumstances which conduce to the depravation of healthy action;—the vitiation of the nutritive operations, and the ultimate establishment of what is commonly called a bad habit of body.

Of these, the most operative, are confinement in a contaminated atmosphere, in moist, cold, and especially dark situations,—meagre or crude diet,—the free indulgence of spirituous or other heating potations,—inadequate clothing,—laborious, fatiguing, or sedentary occupations, particularly such as require a curvature of the body, as that of tailors, shoemakers, weavers, seamstresses, &c. The influence of these agencies is strikingly evinced in the prevalence of phthisis among the operatives of the manufacturing establishments of Europe;—and I have much reason to suppose, that evidence of the same kind might be drawn from our

own in this and other large cities, where they are carried on in cellars, and such like obscure, damp, chilly, and improper places.

Experiments on animals would seem, and indeed, have been generally thought, to put this point beyond controversy. They were made on a number of rabbits, which, previously in sound health, by being put into a cage covered so as to exclude the light,—and fed sparingly on unsuitable food, were found to pine away, and some dying;—on dissection, tubercles in several stages, even to disorganization of structure, were abundantly detected. The same course was pursued on other animals, and with similar results,—the former by Baron and Jenner, of England, and the latter by Flourence of France.

Long and generally, indeed, has it been asserted, that the brute creation of every description, when thus treated, are subject to such degenerations. That swine, in the filth of their sties, and meagerly fed, are exceedingly so, is notorious, and we are informed by Louis, that nearly all of the milch cows of Paris, kept in stables, a very common practice in that city, perish of tubercles.

Confirmatory of this position, it may be added, that in our old and ill-managed Penitentiary, in which the convicts were crowded together in cells or dormitories, or other places of confinement, debarred of exercise, and breathing foul air, manifested in an extraordinary degree, this effect. Diminished probably, in the new and ameliorated establishment, we have still frightful representations to the same purport. Negroes especially, it appears, on well authenticated evidence, die in large numbers annually. Can there be, indeed, any other result from a state of solitary confinement and its inseparable horrors?

In private life, and in the highest orders of society, some of the same causes powerfully operate, and the more so on women. Many of their habits and practices have this tendency. Too much confined within doors by their domestic duties, they scarcely ever venture out adequately clothed, and particularly when they exchange the ordinary for the flimsy attire in which they are equipped on occasions of public exhibition. Then it is that the warm investments of the morning are substituted by the light, gossamer draperies of the evening. With the neck and arms half denuded, and the feet scarcely more protected, do they rush at some late hour of the night from heated rooms,—worn down and

exhausted, to plunge into the external air, often cold, damp, and chilly, in a state of the greatest susceptibility to the aggression of pulmonary affection.

Baneful, however, as this may be, it is, perhaps, equalled by the preposterous custom of tight lacing, against which, medical men have never ceased to remonstrate, whether in the shape of the old stays, or the modern corset. It acts by compressing the chest, narrowing the lateral diameter, thereby impeding the freedom of respiration, which leads to structural lesions, and in short, produces artificially that sort of conformation predisposing to, or exciting phthisis. Nor is this its only pernicious tendency. By a similar pressure on the stomach, and other chylopoietic viscera, it deranges their functions, ultimately vitiating the digestive and nutritive processes, and thus tending to tubercular formations. Moreover, it greatly affects the uterine operations, by which the same sort of effect on the lungs is induced.

Certain climates and locations have great influence on the production of phthisis. It is undeniable, that while the hyperborean and torrid regions comparatively escape this severe scourge, it is the medium latitudes, when moist and chilly, and especially a residence in overgrown cities, or along the sea coast, that generates the consumptive diathesis. The British Isles, which answer to this description, are singularly exposed to the disease,—and London, more than the smaller towns, the country being much less so, except on the margin of the sea.

The United States afford similar illustrations. It is on the littoral boundaries of our north-eastern territories that it extensively prevails, and greatly in New York, Newport and Boston. As we advance southerly, and particularly receding from the ocean, it sensibly diminishes. The native population of this city is nearly exempt from the disease, and the fact is important, as showing the influence of locality. Equally remote from the sea and the mountains, it comparatively escapes from the austere winds of the one and the cold blasts of the other, maintaining a more regular and moderate temperature than the latitude of its position would seem to warrant.

That our bills of mortality exhibit a number of deaths from the disease cannot be denied. But most of these are negroes or foreigners,—and it must also be known, that all chronic pectoral affections are reported with little discrimination under the title

of consumption. It is, at least, a fact, that in the whole circle of my acquaintance, wide and intimate as it is, there is hardly an indigenous family who has the phthisical taint, or who for years has lost a member of it by this disease.

Great as may be the influence of certain positions on the native population, it is incomparably more so in regard to emigrants from hot climates. The West Indian readily acquires the disease in Great Britain, and the Southern negro, especially on his removal to any of our northern states. Of all acts of cruelty, the most atrocious towards this miserable race is, the encouragement which has sometimes been held out to them to come among us by our silly enthusiasts. Not to mention the complicated hardships to which they are exposed on their arrival, as well from their forlorn and helpless condition, as uncontrolled vicious propensities—most of them soon become tenants of our almshouses or infirmaries, or of the cells of our penitentiaries, and a large majority prematurely perish from consumption. Even animals experience the same effects by a similar translation, and which has been remarked most conspicuously of the blood horse.

But, what is not so well known, I shall hereafter have occasion to mention more in detail, that the contrary no less holds, or that the natives of cold regions by emigration to those permanently the reverse, are in like manner affected.

As causes of phthisis, the common inflammations of the pulmonary structure wherever seated, whether in the mucous, cellular or serous tissue, in the form of catarrh, bronchitis, pneumony, or pleurisy, have long been considered as among the most frequent and decisive. But so far as concerns the production of tubercles, this is now questioned by several of the most authoritative of the modern writers. Not to enter into the discussion of this postulate, at present, I shall premit it with the remark, that they have undeniably an accessory or exciting agency.

On the same footing may be placed certain employments, in which acrid or irritating particles are thrown off and inhaled by the lungs, as stone-cutting, milling, grinding of glass or needles, the working of metals, &c., and to which perhaps may be added, as operating in a somewhat similar mode, the playing on wind-instruments, or loud singing, or haranguing, or other violent exertions of the vocal powers.

Much has been imputed to hæmoptysis in this relation. Cullen

and most of the older writers, consider it, indeed, as the principal cause, and we have in some of the nosologies a species of the disease entitled "*phthisis ab hæmoptoe*." But this is an egregious mistake, the effusion of blood being merely an effect of an antecedent morbid condition of the lungs. An hæmorrhage is evidence of a lesion already existing, and not the occasion of it, or to use the language of Dessault, "It is an hæmoptysis from consumption, rather than consumption from hæmoptysis." Even further does Portal go in the declaration, that instead of hæmorrhage acting as a cause of phthisis it has a contrary effect, or that persons naturally spitting blood, very seldom acquire the disease. Corroborative of this opinion, which was doubtless the result of very enlarged observation, for he was one of the most distinguished men of the time, he cites several authorities, and among others the following passage from Billau: "*Magnas excretiones sanguinis ex pulmone minus esse periculosa quam parvas*."

Not to agree entirely with this doctrine, which seems to me to be here urged extravagantly, and at all events, not with sufficient qualification, I am prepared to say, that such periodical losses of blood, where a congestive or phlogistic condition prevails, may exercise a salutary tendency, even to the prevention of phthisis itself. Nature, under these circumstances, wisely performs the office which otherwise devolves on the practitioner of periodically drawing away blood. As the hæmorrhage often precedes all other pulmonary symptoms or expressions of the disease, it is probable this circumstance led to the error of supposing that, the latter proceeded from it.

Contagion was early alleged, so early as the time of Hippocrates, to be one of the active causes of phthisis, and is viewed in the same light by some of the Italian and Spanish writers especially. Morgagni, a native and resident of the former country, is said to have been so deeply impressed with the danger of it, that he refused to dissect persons dying of the disease, and hence the paucity of contributions to the subject in his great work on pathological anatomy. This property, indeed, it has been held to possess in such a degree by some, as to be propagated by fomites, and accordingly the bed and coverings, and other furniture of the chamber,—the wearing apparel of the sick, with every thing else thought capable of imbibing and retaining infection,

were destroyed after death, or underwent a process of purification.

Conversant as I am with this disease, never have I had the slightest reason to suspect any quality of the kind to be attached to it, and I believe there is now no respectable professional authority against me. Examining the proof usually adduced in support of the opposite notion, I find that it amounts to no more than that the disease may have appeared in some one having had the most intercourse with the deceased. But have we not an adequate explanation of such occasional occurrences, in the effects of the long continued watchings, cares, solitudes, and heart-rending griefs of those who stood in this intimate and fond relation? It is the wife, the mother, the daughter, the sister, who only incur this penalty of keen sensibilities, and steadier, and purer, and holier devotions and sacrifices!

“O woman, in our hours of ease,
Uncertain, coy, and hard to please,
And variable as the shade
By the light quivering aspen made;
When pain and anguish wring the brow,
A ministering angel thou!”

To this copious catalogue of physical causes, I am now to add some of a moral and intellectual nature. The intense application of the mind, even when agreeably employed, may prove injurious in this way, and hence the proneness of literary men in every age to the disease, which, however, in part, ought perhaps to be referred to their sedentary and other pernicious habits. More certainly do the corrosions of care, the troubles of adverse fortune, the anxieties and worriments of any description, and above all, deep-rooted griefs and sorrows contribute to this end, and especially when preying on a highly wrought sensibility, natural or acquired. Many such instances are recorded, and several of the most afflicting I have witnessed.

Consumption may also be of a secondary kind, so far at least as that it is brought on by the irritations from remote or detached organs, as of the the upper part of the windpipe or throat,—enlarged tonsils, or elongated uvula particularly, as well as of certain states of the abdominal viscera,—the stomach, the upper bowels,—the liver and uterus, &c.

An habitually dry or unperspirable skin promotes the same effect, and on other occasions the pulmonary irritation seems to be supplied by the repercussion of eruptions, acute or chronic, or the sudden drying up of established drains or discharges, as setons or issues,—or the healing of old ulcers,—the suppression of hæmorrhages of long standing,—the nasal, rectal, uterine, and the menstrual flux.

These are the principal circumstances supposed to be creative of the predisposition to, or which excite or accelerate tubercular degenerations. But of the propriety of including some of them in the etiology of genuine phthisis, I am exceedingly distrustful. It appears to me more probable, for instance, that acrid inhalations are rather productive of chronic catarrh, or bronchitis, or pneumonia,—and confinement, with bad or scanty nourishment, of scrofula. The fact is, that on this point our intelligence still retains much of the vagueness which formerly belonged to the whole subject of consumption, and requires to be rectified by a careful investigation.

Next, we are to endeavour the determination of the direct or immediate mode in which tubercles are generated. Excepting the absurd conjectures of Hippocrates and his immediate followers, the earliest notion perhaps regarding it was, that they are enlargements of lymphatic glands. Notwithstanding the countenance given to it by Broussais, it is entirely unfounded. Tubercles do not correspond with these glands in any stage of their progress, and those of the lungs, certainly do not equal one-hundredth part of the tubercles which they sometimes contain.

That they are the product of a vitiated or anormal nutrition, and are formed by a deposition of matter from the extreme vessels, most frequently the white,—though sometimes the red,—incongruous to the texture, and inconsistent with the well being of the organ in which it may take place, seems undeniable. The usual soundness of the digestive process in consumption, does not, as may appear at a glance, militate against such a view, as I shall hereafter show.

Of the precise character of this elementary substance, we are imperfectly informed. By some it is said to resemble, at first, a small vesicular hydatid;—by others to consist of a particle of purulent like matter;—while the better opinion refers it to albumen or lymph.

From the consideration that the former of the two last mentioned elements is constantly escaping as a habitus, in a natural state of things, in subserviency to the process of nutrition, as well as its abounding in the composition of tubercles, we may reasonably suppose that it most uniformly supplies the rudimental material. Nevertheless, tubercles vary in their external aspect, and on analysis, are occasionally found to contain both albumen and fibrin. Constituted, however, as they may be of these ingredients, either separate or combined, the matter is vitiated, having a deficient, or no vitality, by which it is rendered incapable of any definite or active organization, or assimilation with the parts in which it is deposited, and hence proving an extraneous source of irritation, and of those disastrous consequences which ultimately take place.

The nature of the action leading to this result, has been warmly disputed, and still remains unsettled. Even the late pathologists are divided on this point. Bayle and Laennec consider tubercles as not one of the terminations of inflammation, or in any way connected with it, the latter comparing their formation to that of scrofulous tumours in other portions of the body,—while Broussais, Allison, and others of nearly equal authority, maintain the contrary. It seems to me that tubercles may be generated with or without the inflammatory process. There are many facts to support this opinion, which my time will not permit me to recite. Conditions the most opposite so deprave the function of secretion, as to give rise to these morbid growths. As, however, in analogous instances of a change of structure, or of new formations, an antecedent irritation unquestionably prevails in the lungs, by which an excess of blood is invited to them, to furnish the material of the anormal product, and this congestion may be passive or exalted into phlogosis. Contemplating the causes of phthisis, we shall find that not a few of them are calculated for such an effect. An experiment of Cruveilhier, especially, has been thought very aptly to illustrate this position in all its relations. Crude mercury was injected through the windpipe into the lungs of an animal, and after a while, it becoming consumptive, he killed it, and on examination, discovered these organs studded with tubercular-like formations, of which small globules of mercury were the nuclei. Coagulable lymph had first been deposited over the globules, giving to them an investment which in various degrees

had degenerated into this state. Not having, however, seen any precise account of the experiment, I am unable to determine how far the conclusion drawn from it is warranted. It is not unlikely that what was construed into an identity with tubercles, was nothing more than happens in the instance of a bullet or any other extraneous substance lodged in the lungs. Lymph in the same manner is here soon thrown around it, and the adjacent textures become degenerated.

In the speculations regarding the origin of tubercles, an important consideration has not been sufficiently adverted to,—the agency of a peculiar diathesis. Neither inflammation, nor the reverse, nor any other conceivable condition, without this modifying influence, eventuates in these productions. Connected, however, with such cachexy, which is the *sine qua non*, either an excited or depressed action alike conduces to this specific result.

But, whatever may be the manner of generation, we learn that primarily, tubercles are commonly very minute, and consist of a viscid fluid, subsequently becoming firm, and of considerable sizes. This is the generally received doctrine. Declining the consideration of the mode in which the induration takes place as sufficiently intelligible, how they acquire their growth may deserve some inquiry. Being inorganic, it cannot be by their own vital energies, and it is now usually referred simply to accretion, with which explanation I am not at all satisfied, seeing many difficulties to its adoption;—and I strongly doubt, whether in this particular they undergo any change, though I shall not deny it, much less endeavour its formal refutation. Thus far, however, may be affirmed, that we have no evidence of these primordia receiving any fresh accession of matter, and that it is more probable the diversity of dimensions in tubercles, are original from the several proportions of the deposits at the time of their formation. They are found scarcely in any instances of equal sizes, varying on the contrary from a granule to a nut, or a large mass, or cake, as in the tubercular infiltration.

Leaving this debateable point, it seems of greater certainty, that tubercles may remain for a long interval, sometimes even for years, in a state of indolence, producing little or no inconvenience. Examples are numerous, where after death the lungs were seen studded with them, without their having been betrayed by any pulmonary disturbance. Excited, however, by the causes

of pulmonary irritation, the disease denominated consumption is unfolded. The tubercles at first, become red and vascular, that is, the investing tissue, while they themselves soften, and are yellow and opaque;—these changes, according to Laennec, commencing in the centre, and extending to the circumference. But by Louis and Carswell, the reverse is asserted, or that the softening process begins at the circumference and proceeds to the centre, which is the more likely, from considerations presently to appear.

How this compact indurated tumour is thus converted has not perhaps been determined. By some it is vaguely referred to a peculiar or specific mode of action. Laennec denies that it is at all analogous to inflammation, while others maintain it to be the result of a genuine suppurative operation. Tubercles being inorganic, such vital changes cannot take place in them. But it is to be recollected that they are invested with a tunic of cellular membrane susceptible of phlogosis, which happening, pus is secreted, and this mixing with the tubercular mass, it becomes gradually disintegrated or broken down and softened, exhibiting a curdy or cheese-like consistence, or a thinner, and more purulent aspect. The tubercle in this state is called a vomica, in contradistinction to pulmonary abscess. The fluid, when formed, usually makes its way through the bronchi and is expectorated. An incorrect idea was once entertained, that on this event occurring, a rupture had taken place, and the vomica which previously was designated by the term occult, now received the title of open vomica. But such a lesion, though it may take place, is not at all necessary to the evacuation of the fluid. Each matured tubercle may have one or more of the bronchi communicating with it, and as the matter softens or pus is formed, it escapes through these tubes, without any rupture of the sac in which it is contained.

Being emptied, the sides of the excavation are lined by a false membrane, thin, white, smooth, and so delicately adhering, that it is readily detached. But in some instances, though rarely, it is wanting,—the natural tissue of the lungs existing, condensed and florid, charged with tubercular degenerations in different stages. The false membrane is thought by Bayle to secrete the pus in this case, while Laennec conjectures that, in part, at least, it proceeds from bronchial irritation. No doubt, in my opinion, it does, and equally clear it is to me, that more or less of the mu-

cous lining of the trachea is concerned in the production of it, as happens in chronic pleurisy. Expectoration decidedly purulent, I have often seen in consumption, prior to the maturation of tubercles, and where it could only have been secreted by the bronchial and tracheal surfaces.

To this general history of tubercles, there is among other particularities, not sufficiently striking to deserve notice, one which, perhaps, claims attention. Bayle states, that in some few cases, coeval with the formation of the tubercle, it is embraced by a hard, thick, cartilaginous coat, connected so firmly with the adjacent substance, that it can only be removed by the knife, or the most forcible detraction, and on scraping off the matter, which is very adhesive, presenting in the interior a smooth polished surface. These are termed encysted tubercles, which must be of very rare occurrence, since Louis, in his very extensive dissections, met with them only once, and then at the summit of the superior lobes.

By the multiplication of tubercular degeneracies, the substance of the lung is sometimes in a great degree ultimately involved in one mass of disease.

In regard to granular tubercles, we are scarcely prepared to pronounce on the career which they pursue. To the controversy concerning them, I formerly alluded, and it will be remembered, that while by Laennec they are held to be identical with the miliary, or varying only "as green does from ripe fruit," and passing through the same changes, it is the opinion of others, that they are essentially different in their composition and nature, continuing permanently immutable. Bayle, by whom the latter view is sustained, admits, however, that though unalterable, they cause by irritation an excavation in the neighbouring parenchyma, lined ultimately by a membrane, which secretes pus, thus operating to the production of phthisis.

The interstitial deposits of tubercular matter, may remain stationary or undergo changes very similar to those of miliary tubercles, gradually softening, till the whole mass is reduced, and evacuated, leaving behind a secretory excavation. No description of tubercular depositions however, do uniformly undergo the changes I have indicated. Existing in excess, death will sometimes take place, before any portion of the mass has arrived at maturity, and consequently, before an excavation is formed. As extraneous

products, they irritate the system into hectic fever, with its devastating effects,—and on some occasions, even without the slightest advance from their primary condition, of which, examples are not of unfrequent occurrence.

In establishing a diagnosis between consumption, and the other pectoral affections, simulating it, where the obscurity is great, no narrow view will suffice. We must bring before us the whole history of the case, meditate, compare, and analyze the symptoms,—and in aid of this critical process, then, to appeal to percussion and auscultation in the mode fully pointed out by the late writers as well suited to enlighten our judgments, and conduct us to just conclusions.

The affections with which phthisis is usually confounded, are chronic catarrh,—bronchitis,—pleurisy,—pneumony,—certain lesions of the windpipe or throat or of the heart,—and, their respective peculiarities and distinctive signs, are well marked. Bear in mind as most characteristic of tubercular phthisis, that in the commencement, are shortness of breath, easily induced by any exertion,—even by speaking,—dry cough usually of protracted continuance, with glairy expectoration,—pains more or less acute in the breast, or sides, penetrating to the shoulders,—progressive emaciation, and loss of muscular strength,—some slight irritative fever,—heat in the palms of the hands, and soles of the feet, sometimes hæmoptysis, and nearly always, an accelerated pulse. Coupled with these symptoms, should there be, on percussion, a dull sound under one of the clavicles or shoulder blades, for a small extent, and the respiratory murmur prove feeble, and in some degree wheezing,—such phenomena being absent in other parts of the chest, we may be pretty positive of the existence of the disease. The case calculated to create any considerable doubt is the hepatization of chronic pneumony. But here, independently of other differences, the latter lesion is almost uniformly in the lower lobes.

Tubercles having softened, a progressive increase of the preceding state takes place, with a cough more hollow and cavernous. The glairy and colourless sputum hitherto existing contains small insular specks, gradually increasing in size, of opaque matter, of a pale yellow hue, surrounded by phlegmy fluid;—or consists of tenaceous mucus, sometimes of a puruloid aspect, with perhaps, fragments more unequivocally of tubercles, distributed through

it,—streaked with blood, or greater hæmorrhagic discharge. Examining the chest at this period, we shall perceive, that the upper parts of it are raised by the efforts of inspiration with difficulty, and which is often more evident in the one, than the other side.

From percussion, the sound emitted, is now very dull, and mostly at both clavicles,—though it may still be restricted to one—and, auscultation reveals a crackling like noise, or what is called the *crepitating rhonchus*, which, however, by coughing is temporarily converted into a gurgling sound, or *cavernous rhonchus*. The voice is resonant, in some instances, amounting to bronchophony. But while such is the tenor of the physical signs, we are told by a writer of intelligence, that, at this stage by percussion, a sort of jarring, resembling that of a cracked pot is produced, with a peculiar resonance, declaratory of the existence of a cavity,—while the respiration, is in some degree cavernous, attended by the mucous rattle, and the excavation being near the surface, and having thin parietes, every word is accompanied by a puff, similar to that in blowing out a candle.

In a further advanced stage, when the tubercles are completely broken down and dissolved, and large excavations formed, still less perplexity exists. The symptoms here, are very peculiar,—the sepulchral or cavernous cough,—the oppressed respiration,—the purulent, or flocculose or woolly sputa,—the indomitable hectic fever, and its attendants, the copious perspiration, the colliquative diarrhœa,—the attenuation of frame, and singularity of physiognomy. More perhaps, is afforded by the latter in every stage, and particularly the last stage, than from any other circumstance. He indeed, who is conversant with it, by which I mean the totality of outward signs,—though especially the countenance, will rarely be deceived. Greater reliance however, has commonly been placed on the appearance of the expectoration, and when purulent, it being deemed conclusive of ulceration of the lungs, the most anxious inquiries were prosecuted to discover a test of pus. But the long sought for criterion had hardly been attained, when it was determined to be of little or no value. Nearly at the same time, the fact was established that, the purulent secretion more abundantly comes from the bronchial and tracheal surfaces, as well in the ordinary pulmonary irritations, as the tubercular lesions. Nevertheless, the sputa exhibit two conditions worthy of confidence—a mixture with other matter of frag-

ments of softened tubercle, and the thick dabby masses previously noticed. The former of course, must be very conclusive, and the latter is hardly less so. Never have I seen such sputa, except in the maturity of phthisis, and Louis and Chomel declare, that they have only in two cases of other diseases. It is, I am persuaded, nearly the exclusive product of vomica, and fluid pus, in connection with tubercular degenerations, may be held, as almost invariably to come from the mucous surfaces of the lungs.

Concerning the physical signs at this period of the disease, pectoriloquism is nearly an unerring criterion, it occurring in only two other affections. The first of these is bronchial dilatation, the symptoms of which, however, as well as the general condition, are so widely different, that any ambiguity can seldom exist. As to the second, or abscess in pneumony, it is of such extremely rare occurrence, that it does not materially affect the rule. Perhaps, the most perplexing case is the one formerly alluded to, in which the disease goes on even to a fatal termination, without the tubercles having so increased in number, or sufficiently developed, to alter the sound of the chest, or disturb the distinctness of respiration.

In the confident tone with which I have spoken of the certainty of the physical signs, in the diagnostication of this disease, the language of authority, wide, weighty and singularly concurrent, has rather been adopted than the expression of my own unbiassed conviction. It is well known, that amidst all the enthusiasm excited by the subject, in which some of the most illustrious members of the profession, of every country, fully shared, I calmly maintained, that though the value of percussion, and auscultation, was great, it had been, and continued to be, very much overrated. No other view have I ever had of these means, than as important auxiliaries in the exploration of diseases of the chest, not however to be used, towards which I discovered a strong tendency, to the exclusion of the study of symptoms, deemed by me of still greater importance. Distrusting, at once, the infallibility claimed for such revelations, my doubts were strengthened, and confirmed, by the numerous mistakes I had occasion to witness in the practice of the most adroit and best instructed. Even they not unfrequently erred, and the vulgar pretenders to the art I believe, were never right, it being appropriated by them to the purposes of mere charlatanry.

As predicted, it may now be perceived, that this is about to meet the fate of every preceding medical improvement, brought forward with indiscriminate and extravagant praise. Disappointment creates disgust, and in such a state of feeling, a disposition uniformly arises to run into an opposite extreme,—in some instances, to the utter denial of just and well-established merits.

Nearly a century ago, percussion was introduced, or rather revived, by Avenbrugger, of Vienna, for it had been practised by the Father of medicine, and soon put into abeyance, probably, from its alleged pretensions not having been realized. Both it and auscultation seem of late to be gradually losing much of their former cordiality of support, and by many are treated contemptuously. Details I cannot give.

Trousseau, no inferior name, embodies the latter sentiment in a paragraph. "To tell the truth," says he, "I have much greater pleasure in meeting with a man who will teach me the best mode of making a poultice, than with him who professes to instruct me in the differences between the *râle soufflant*, and the *râle sonore*, or how to distinguish the *râle sibilant*, and the *soufflant râle*, or this latter from the *turturin râle*, or this again from the *roucoulant râle*, or the *caverneux râle*, and all such petty distinctions."

Disrespectful as this may be, it is not unprovoked. Divisions so absurdly minute, and the false consequence attached to them, cannot hope to escape ridicule. Consult for a temperate and accurate appreciation of the subject, the writings of Andral, Williams and Stokes, all to be easily procured, in which the fact is inculcated, that while percussion and auscultation are adjutants,—in many cases, not to be dispensed with, they in no degree supersede the light derived from symptoms. Each source of intelligence is held to be worthy of regard, and to the attainment of the fullest advantage from them, should be brought harmonious co-operation.

In the perusal of a recent publication of the first of these eminent men, I was surprised to find the number of instances of plthisis, in which the physical signs are either nugatory or delusive. To the work itself, I must refer those who are curious of particulars. Not more, indeed, is now permitted me to state, than that he declares the sonorousness of the chest, however tuberculated the lungs,—or the stage of the tubercles, crude or softened,

undergoes no change, provided the surrounding parenchyma retains its soundness, which often happens,—and hence, under such circumstances, percussion is entirely unavailing to the detection of this degeneration. Nay, he avers, that in phthisis, the chest may be, and frequently is, even more sonorous than in the natural state, occasioned by the filling up with air of an immense tubercular excavation through the bronchi penetrating into it, or where a large number of pulmonary vesicles have become considerably dilated, and emphysema is extensively induced, when there exists extreme emaciation.

Commenting on auscultation, he says, it announces tubercular lungs in the progressive stages, either by different modifications of the respiratory murmur, or by the existence of different râles, or by the peculiar reverberation of the voice in one or more parts of the chest. Now, we are assured by him, that examples are common of no alteration whatever taking place in any one of these respects, throughout the disease, all remaining as in health, not a *râle* or *pectoriloquy* being heard.

The conditions causing this peculiarity are still undetermined. But while in a spirit of candour, for which he is so remarkable, these and many other objections are alleged against the new mode of pathological investigation, he liberally acknowledges its vast merits,—though still compelled to add, that by abandoning the indications of symptoms, and trusting only to it, we must be often exposed to the most egregious errors. By adverting, indeed, merely to the sources whence the physical signs are derived, we cannot help perceiving how unavoidably they are exposed to fallacy. The sounds from percussion are delicate and varied, hard to be recognized at all times, and in many instances impossible,—while those of auscultation are still more so, in each respect, requiring for their accurate detection and discrimination, an ear naturally refined and improved by assiduous cultivation. Music itself, is not, perhaps, a more difficult or tedious acquisition, or dependent in a greater degree on peculiar endowments,—and of the many who, at present, practice the former art, I need not tell the very few that have these advantages. Even too, after a precise ascertainment of the several tones or sounds furnished by either process, we cannot be assured of their denoting phthisis, since they are incident also to other and very different diseases. Dullness, on percussion, is betrayed in every

consolidation of the lung, however induced, and the multitudinous murmurs and rattles, as manifested by auscultation, proceed from irritations of the mucous tissue, and not the pulmonary parenchyma,—the more ordinary seat of tubercles. They are the signs of tracheal and bronchial affection, which is only associated with the lesion of the lung as one of its complications, occasioned by its extension to the mucous surface, or as sometimes happens, originating in this tissue, it may become united to the other pathological condition in the progress of time. Taking every thing into consideration that has been urged in the preceding review, candour will probably confess, that the claims of this vaunted method of investigation are not quite so perfect as alleged by some of its warm and enthusiastic admirers.

Before dismissing the subject of diagnosis I cannot forbear to urge the importance of endeavouring to ascertain with precision the difference between tubercular and strumous consumption, as I am inclined to believe it may lead to very interesting practical results. The commonly received opinion of the identity of the two conditions, has hitherto prevented attention to this point. But, I think I showed in the early part of my inquiry into it, that they materially vary, and at the same time supplied some particulars which may contribute towards a more satisfactory diagnosis.

Not to go over again the same ground, I shall now only remark, that the most prominent of the peculiarities of scrofulous phthisis are, that it is incident chiefly to early life, even childhood,—that, it occurs in those with a peculiar physical conformation,—is preceded or accompanied by great gastric or enteric derangement, such as bad digestion, alternate constipation and diarrhœa, light or clay coloured stools, tumid abdomen, and sometimes external tumours, and other marks of a strumous habit in which, at least, the lymphatic more than any other system of the body is affected.

Taken in the very early or inchoative stage, by a correct course of discipline, consumption may be prevented, or arrested. Tubercles, however, having actually formed, I deem it very questionable, whether they are ever entirely removed. The notion of their occasional eradication, probably proceeds from their being sometimes checked in activity of development, either spontaneously, or by remedies allaying the exacerbating irritations, and the temporary respite that then may ensue, leading to the mis-

take of complete relief. Be this as it may, tubercles once established, so as fully to involve the lungs, the disease of which they are productive I believe cannot be cured by any system of practice, hitherto proposed, and we shall be deficient in candour, and hazard our reputation, by venturing on a favourable prediction. The wound here inflicted, is the "*vulnus immedicabile*," which though some lenitive may assuage, no balm has yet been found to heal.

That an opposite sentiment has been advanced by several of the modern authorities, I am aware. Tubercles, they contend, when once excited cannot be checked in their progress. Their ultimate destination is irreversible. Becoming however, matured, the cavity which they leave behind, may take on the healing process, and entire cure is effected. "The idea," says Laennec, "of the cure of consumption in its early stage, is perfectly illusive. Crude tubercles tend essentially to increase in size, and to become soft. Though nature and art may retard their progress, neither can reverse it. But while," continues he, "I admit the incurability of consumption in the early stages, I am convinced, from a great number of facts, that in some cases, the disease is curable in the latter stages, that is after the softening of the tubercles, and the formation of an excavation." More of this hereafter.

Nevertheless, certain circumstances materially influence the result, the most prominent of which I shall enumerate. It may in the first place be remarked, that it is least tractable when hereditary, or connected with a bad formation of the chest, or the decidedly tubercular, contra-distinguished from the strumous diathesis, prevails.

Commencing as laryngitis, or this being disclosed in its progress, it is scarcely less so. Exceedingly unmanageable does it also prove, where a suspension of the menses obstinately prevails. Never, indeed, have I seen one instance ameliorated without the previous restoration of this function.

That pregnancy has almost an invariable tendency to suspend the disease is notorious. This I have known very strikingly displayed in several cases, in which every symptom of pectoral affection ceased during the period of gestation. But it as constantly happens on delivery, that it returns with aggravation, and hurries on to a fatal termination.

By some diseases too, it is suspended. Mania, chronic eruptions, gout and rheumatism sometimes do it. There is indeed a mixed variety of the latter affections, attacking more especially the smaller joints, inducing permanent enlargements, and deposits of calcareous matter, which so strongly exercises such an influence, that it may almost be deemed a cure. Three instances of its conspicuous efficacy, in this way, have come under my notice. The same is partly true of fistula in ano. Consumption and it are often coincident, the former being generally checked or mitigated by the latter. This however healing, which is very difficult to accomplish, under such circumstances, the pulmonary affection I have uniformly found to be immediately exasperated to a fatal issue.

An attack introduced by hæmoptysis or where it is of occasional recurrence, the chance of recovery is increased. Cases with the expectoration of chalk stones chiefly, or unattended by purulent sputa, are of similar character, they very often ending favourably. But in forming our predictions great reliance is placed on the new methods of exploration. By the united aid of percussion and auscultation, it is generally believed the condition of the lungs may be with more exactness ascertained, than by any other source of intelligence, and from the indications thereby afforded, we shall be enabled to draw conclusions approaching nearest to certainty.

The duration of consumption, as we have seen, is various. But there are signs denoting early dissolution, with which we ought to be acquainted, as grounds of prognostication of the event. These are a sudden increase of debility and emaciation, attended by colliquative diarrhœa and sweats,—copious expectoration, especially of fetid pus,—œdematous swellings of the lower extremities, and above all aphthæ in the mouth and fauces, difficult deglutition, and hoarseness or loss of voice, which last are invariably mortal symptoms.

Consumption terminates by the patient gradually sliding out of existence from mere exhaustion, or suddenly by the rupture of a large vomica, or by hæmorrhage, or from the occurrence of pneumothorax, or pulmonary emphysema, or œdema, or by suffocation from inordinate bronchial secretion, owing to inability to raise up and expectorate the matter.

The common impression, that most persons perish of this disease in the spring and especially in the month of March, seems not to be well founded, as regards all climates. Taking the result of three years, of two hundred and forty-four cases, it is shown by Bayle, that the mortality is nearly equal in every season. Thus, of this number, in autumn, sixty-four died—in winter fifty-eight—in spring fifty-four—and in summer sixty-eight. But I doubt whether such an estimate would apply to our own, or other countries, marked by great diversity of seasons, and variableness of weather. From my own observations, I am pretty well persuaded that, in this city, the greatest degree of mortality is in the early part of the spring, and the close of summer,—the effects of intense heat being more baneful than those of severe cold, and quite equal to the influence of the fluctuations in our vernal weather.

The appearances in this disease on dissection, may be pretty fully collected from the history I have given of the progress of tubercles, from their inception, through the various stages to maturity. To this description, however, may be added some further particulars, among which, is the important fact especially in a therapeutic view, that there are successive crops of these productions. By no means uncommon is it that, when the primitive tubercles, occupying the upper portion of the lungs, have reached maturity or are rapidly advancing towards it, a second eruption takes place below them, and so on in succession, till the entire organ may be implicated. This is a common, though not the invariable order of their development. It follows hence, that on inspection, we may expect to find the lungs more or less studded with these successive crops in every stage, from the primordial to that of softening and the excavation.

It was once supposed that tubercles were confined to the lungs themselves. But this is so far from the fact, that scarcely any part of the body escapes them. Differences, however, exist in the liability of structures to these productions. Excepting the pulmonary organs, the lymphatic system is said to be the most, and the voluntary muscles the least exposed to them. But wherever else existing, they are nearly always simultaneously found in the lungs, and there more developed, appearing also in other places to be subsequent developments. Louis states that he has

met with only a solitary exception to this rule.* Too much time would it occupy to trace out, at present, the progress of tubercles in the several positions enumerated.

Connected, however, with the specific depravations of the lungs, there are also to be met with, the phenomena of bronchitis, pleuritis or pneumonitis, &c., these affections having been superinduced on, or evolved by the tubercular condition. The two last and especially pleurisy, are very common. Louis tells us, that in one hundred and twelve cases of phthisis, he found only one lung which was perfectly free from adhesions, and that recent inflam-

* He has given a table of the relative proportions in three hundred and fifty-eight cases which he examined *post-mortem*.

Except one, the lungs exhibited disease in every instance.

The small intestines, in nearly one third.

The large intestines, in one ninth.

The mesenteric glands, in one fourth.

The cervical glands, in one tenth.

The lumbar glands, in one twelfth.

The prostate, in one thirteenth.

The ovaries, the same.

The kidneys, in one fortieth.

The uterus, brain, cerebellum, medulla oblongata, and ureters, one only.

This table, however, is unsatisfactory, as well on account of its not including these productions in other structures of the body, as that it is indiscriminative of the circumstances which modify the result;—and above all, the ages of the subjects. For example, the difference is most material in this respect, in early life. Lombart reports, that out of one hundred children whom he carefully inspected, he found the ensuing proportions:—

In the bronchial glands, eighty-seven cases,—in the pulmonary structure itself thirty,—in the right lung seventeen, and the left, thirteen.

In the mesenteric glands, thirty-one.

In the spleen, twenty-five,—the kidneys eleven, the bowels nine, and the brain, the same.

In the cervical glands, seven, and in the cerebral meninges, six.

In the pancreas,—gastro hepatic glands,—the cellular tissue lining the peritoneum, five.

In the inguinal glands, three,—in the cellular tissue lining the pleura, two, and in the lumbar glands, urinary and gall-bladder, omentum, and false membranes covering the pleura, one only.

But these estimates cannot be deemed more than approximations to the truth. As regards the affectability of the various organs to such occurrences, there is little agreement among writers of equal weight, except as to the general fact, that tubercles are more distributed in children, than afterwards, or at matured life,—that at this early period, they greatly preponderate in the bronchial glands over the lungs, and indeed, that they may exist in the former, without being in the latter appreciable.

mation of the pleura was detected even in the latest period of the former disease, in one tenth part of the subjects examined. Pneumony he says is to be observed in the final stages of consumption, in one of three of the cases of it, sometimes in the first, and on other occasions, in the second degree of inflammation. Lesions of the windpipe, I suspect, are quite as frequent. The mucous coat is usually described as red, thickened and often ulcerated,—these appearances being exhibited throughout its whole extent, in various degrees and locations, in different cases, from the top of the larynx to the bronchial ramifications.

Moreover, the *primæ viæ* suffer extremely. The stomach is sometimes of very increased dimensions, with an extenuation of its parietes,—its mucous tissue florid, vascular, thickened and firmer than natural, or softened and ulcerated. Nearly in the same condition are the bowels, especially the ileum,—though more abounding in ulcers, and it merits observation, that whenever deep ulceration prevails, there is usually greater density of the other coats, nature taking this precaution against a communication through them by rupture. The liver is very apt to be converted into a fatty or tallowy state. Louis found it so in forty, out of one hundred and twenty cases.

Further, we have in the lungs themselves, occasionally the evidence of those modifications of the same diatheses, which Bayle has erected into distinct divisions of the consumptive state. They are granulated, associated or otherwise, with common tubercles, in their several states, as previously described.

There are, in other instances, masses of a blackish colour, encisted, resembling somewhat a bronchial gland, which is sometimes ulcerated, or the same softened to a pulp,—or an original secretion of it in a still more fluid state, on which the title of melanosis is conferred. The residue of the lung may be sound, or dark, and of the consistence of burnt leather. We meet at other times with an ulcer in the substance, or surface of the lung, of a ragged irregular character, without a membranous lining, secreting an imperfect, grayish, brownish, or blackish pus, of a gangrenous smell, with the traces of recent or remote hæmorrhage. This is the ulcerous species of Bayle, and the local gangrene of Laennec. Calculous concretions, on other occasions, are observable, resembling small stones or lumps of chalk, composed usually of the phosphate of lime, with small portions of carbonate

of lime, carbonate of magnesia, and animal matter, and so embedded in the cellular texture as to form a cyst. They very rarely occur in connection with phthisis according to my observations, or indeed, under any other circumstances. But we are told differently by writers, and particularly by Rogée, who asserts, that out of one hundred old women whom he had examined, he detected cretaceous tubercles in rather more than a half. Not probable is this statement, and the less so, the conjecture of the tubercular nature of the productions. No features in common exist;—the former are more apt to occur independently of any phthisical taint, and in special relation to the cases in question, they could not possibly have been of the kind, as the generation of tubercles at all, is quite an anomaly in advanced age.

Nor are ossifications wanting. Bayle has described the sac of an encysted tubercle as imperfectly so, and Laennec, one as large as a hen's egg, more thoroughly converted into bone. An instance of still more complete ossification came under my notice, where a bone of the size and shape of the sternum, was enclosed in the substance of the lung. It occurred in a gentleman somewhat advanced in life, who died apparently of phthisis, preceded many years by spitting of blood, and other well marked symptoms of the disease. No tubercular affection whatever existed, the bone lying, as it were, in an ulcerous cavity surrounded by pus, which had been freely expectorated, and this was the main appreciable lesion. With his wonted care and precision, Professor Horner made the dissection, and the preparation is now in the anatomical museum of our university.

Cancer has also been remarked usually in the state of scirrhus, situated in the parenchyma singly or numerous, with the surrounding substance, variously degenerated. But it is sometimes soft, observing the same course as cancerous affections in other portions of the body.*

Common to the pathological conditions described is sometimes a communication established between the lung and pleura, from ulceration, by which the cavity of the latter becomes filled with air constituting pneumothorax, and in other instances is present pulmonary emphysema, either vesicular or interlobular, or both, by which is meant air in the cells, or cellular membrane between the

* Bayle, page 34.

the lobules—or we have œdema or hydrothorax, the serous effusion being in the cellular texture of the lung, or in the pleural cavity.

Lastly, I am cursorily to notice certain appearances which I deem almost peculiar to strumous consumption. These appertain principally to the lymphatic system. It sometimes happens, that the lesions are limited to the glands surrounding the bronchii, where they enter the lung, and which are variously changed, simply hypertrophied, or hardened, or softened, or ulcerated,—the latter to such an extent, as to have removed the whole glandular substance, leaving a cavity secreting *illaudible* pus. Cut open in a previous stage, there may be pressed out soft caseous matter, very much like that from an external scrofulous tumour. On other occasions, however, a more pervading affection of the same system is manifested. Besides the bronchial, the pulmonary, the mesenteric, the lumbar, the inguinal, the axillary glands, &c. &c., are more or less deeply concerned, separately, or conjointly with the lesions of the pulmonary structure. From my own observations, I should say, that these bear a very slight similitude to the phenomena of tubercles, and hence entirely dissent from the prevalent opinion which maintains their perfect identity. The degeneracy of the glands, whether of the interior or periphery of the body, is purely strumous in every thing relative to it. With few exceptions, we meet with such appearances uniformly in the phthisis of early life, even in infancy or childhood, the very season of the predominance of scrofula,—lending to my views further, and very substantial support.

To what extent, if at all, genuine tubercles are associated with this condition, I think has not been satisfactorily decided. Considering the incompatibility of the actions of these two diseases, it is not reasonable to suppose they could arise or continue simultaneously. The scrofulous origin of tubercles having been long a settled notion, no one has of late cared very seriously to inquire into the foundation on which it rests. But I now call attention to the point, as one curious in itself, and eminently important in its practical bearings, with the hope it may solicit the labours of some of those competent to its thorough investigation.

As detailed, such are the more prominent anatomical characters of phthisis pulmonalis with its usual complications, rapidly sketched, and hence imperfectly represented. But I have done

as much as my limits would allow, and any deficiencies I the less regret, as they may be supplied by the consultation of treatises on the subject, from which no one need be debarred.

In the preceding history of this disease, so much of its pathology has been unfolded, that little remains to be considered. Essentially, it is referable to those extraneous tubercular productions which I have described,—each stage of it being influenced by their progression. To them, is owing directly, or indirectly, the disordered respiration,—the cough,—the peculiarity of the sputa,—the hectic fever,—the colliquative diarrhœa, and perspiration, as well as the rapid emaciation, and, in short, every other prominent affection. They are a source of perpetual irritation to the system, and these its effects.

Frequently has astonishment been expressed, that, though the appetite is often eager for food, and the digestive powers apparently, for the most part, vigorous, throughout the disease, so that really there is no diminution of nutriment taken, the waste of flesh and strength should happen. The phenomenon is usually explained on the supposition of a vast increase of absorption. No evidence, however, have we of the fact, and indeed the reverse, or that absorption is languidly executed, seems to be true. Were it otherwise, it is not unlikely, the tuberculous matter would be taken up, and the disease prevented, or cured after its establishment. Doubtless, it is owing to an imperfection in the process of nutrition,—a function consisting of a series of operations, commencing in the stomach, and terminating in the capillary vessels. By the first part of the apparatus, it may be well performed, and defectively in any of the subsequent portions. The lungs are here in fault, which from their diseased state, are rendered incapable of completing the fabrication of blood, and hence the capillaries are without a supply of proper materials to form their nutritive deposits. What comes to them is rejected, as unfit for their purposes.

Blood thus crude and unanimalized, cannot be circulated with safety to the economy,—and every effort is made to throw it out by the emunctories, as we see in other analogous cases. Consequently, the copiousness of perspiration, and probably too, in a certain degree, of the other fluid discharges. It is in this mode, the destruction of substance being constant, and reproduction in-

terruted, that the impoverishment of the body so remarkable in the disease, takes place.

Not generally known is the fact, that, the doctrine of the absolute and exclusive dependence of genuine consumption on tubercles was entertained, and promulgated, by Sylvius de la Boc, so early as 1679,*—and though adopted by some of his successors, eminently authoritative, particularly Moreton and Wepfer, it prevailed to only a limited extent, and soon came to be supplanted by all sorts of absurd hypotheses. But in the year 1733, Dessault,—not the celebrated surgeon, who lived at a later period,—published a work,† in which this doctrine was revived, and substantiated by the diligent researches of more than a third of a century, into the morbid anatomy of phthisis, which he determined with wonderful precision. Notwithstanding this, with few exceptions, no impression was made by the facts revealed. The subject, however, was, after a lapse of many years, again taken up by Starke, a medical genius of the very first order, who prosecuted it with such success, as really to have left nothing further of any value to be discovered.‡ Yet still from the despotism of established opinion,

* Opera Medica, published in 1679.

† Dissertation de Medicine.

‡ The following summary of the facts he ascertained, which I take from a recent writer, warrants the sentiment I have expressed, and at the same time, shows the cruel injustice done to him by those who have lately arrogated his discoveries, without the slightest acknowledgment of their obligations to him.

“He found, that tubercles are not vascular, and exhibit no trace of organization,—that they are of every size, from that of a granule to the diameter of half an inch,—that they soften at various points of their substance,—and, that the cavities left by them, vary in dimensions, from half an inch to three or four inches. He also found, that these cavities communicate with the bronchi by smooth round openings, and with each other by ragged ones,—that they are always lined entirely or partially with a smooth, thin, tender membrane,—that the larger cavities are often observed nearly empty,—that they are generally situated towards the back part of the upper lobe—that their communication with the thoracic cavity is prevented by broad firm adhesions between the pleura costalis, and that portion of the lungs which they occupy,—and, that even crude tubercles are seldom seen unaccompanied by such adhesions. Further, he described most accurately the hepatization of the lung, and the obliteration of the blood-vessels in the vicinity of tubercles, and their excavations. Nor did the thickening and reddening of the bronchi and trachea, nor the excoriations of the intestines, escape his observations.”—*Starke's Clinical and Anatomical Observations and Experiments.*

Even this detail hardly embraces all which he accomplished. Long prior to any of the publications which I charge with usurping his claims, I drew up my

in this instance, truth received scarcely any converts. It appears from the writers on the disease, and it is known to those who were educated at the period, that all the great teachers considered phthisis pulmonalis to consist in some modification of chronic catarrh, pleurisy or pneumony. Not, indeed, till recent times, was the correct pathology firmly established, and for which we are mainly indebted to Bayle, Laennec, Andral and Louis, who though contributing little to what was previously ascertained, have had the advantage of promulgating the results of their labours at a season when pathological anatomy attracted, and has continued to attract, attention. As far as I know, I was the very first to teach the doctrine in this country which I learnt from Starke. My predecessor, Dr. Rush, maintained phthisis to be chronic pneumonia, in which view he was followed by Broussais, —and the united authority of their names, did much to retard the progress of truth on the subject among us.

But the very existence of tubercles supposes an antecedent morbid condition, without which they could not have had a being. An effect must have a cause,—to determine which in this case, is of the highest importance. Content in tracing the connection of the disease with tubercles of the lungs, our inquiries have not proceeded much further. But surely, a more comprehensive view is required to embrace the whole phenomena of the case. Tubercles, as we have seen, so far from being confined exclusively to the lungs, are more or less in every structure to be met with,—not to mention other organic lesions.

Looking at the well established fact, of the pervading character of tubercles, the conclusion is forced on us, that the affection of the lungs is only a part of a general vitiation or pravity of system, of the precise nature of which, however, we are not informed. That it is always of a strumous origin cannot be truly averred, and to call it a tubercular cachexy, is merely an expression, conveying no more precise meaning than that of scrofula. This, then, is a point, from which we are hereafter to start, in the investigation of the pathology of phthisis, and till ascertained, nothing will be acquired of any real importance.

Except, as to the discriminative signs between the lesions of the real tubercular, and strumous varieties, enough surely has account of the anatomical characters of tubercles, and have really derived little since to add to, or correct it, from any source.

been done in tracing the anatomical characters of the disease, which, indeed, are so accurately determined, as to render superfluous any further researches into this part of the subject. Too much attention has, perhaps, been already bestowed upon it, and I cannot commend the direction that is still given to the course of inquiry. The phenomena on dissection, do not constitute the pathology of a disease, and in this, I think, consists the error which has been committed. As well might the ruins from a conflagration, be deemed the fire itself, as the structural lesions disclosed after death be taken for the distempered actions by which they were produced. Equally in each case, are the appearances presented, merely effects of some peculiar agency, and which, as to our immediate concern, should be the great purpose of future investigations. As soon as we have ascertained the exact nature of that condition, on which such extensive mischief depends, and from an ignorance of which, our efforts of cure have in part proved so impotent and unavailing, we may hope to institute a practice far more successful than heretofore.

Of the spurious forms of the disease, meaning to present fully my pathological views, when the subject of distinct consideration, I may be permitted now to pass on with some general remarks only. The chronic inflammatory affections of the lungs and tissues, I shall here wholly exclude. But the claims of several of the other cases—the calculous, the osseous, the scirrhus, and above all the strumous, are far stronger on attention, as having a closer affinity to the genuine disease.

Like it, they are specific in their nature,—originate in an anormal deposit, which undergoes several changes, productive of similar results, hectic fever, exhaustion, death. Not a few, indeed, hold them to be the same, and particularly the scrofulous condition, against which conclusion, I need not repeat my former protestation. They are all dependent on different diatheses, distinct, and as peculiar, as that of the tubercular itself. Each, however, has this further in common, that, while affecting the lungs, the rest of the system may not escape. Calculous, osseous, scirrhus or strumous lesions of the kind, in these organs on the contrary, mostly occur with coincidences elsewhere. Especially is this true of the last, and in so predominant a degree is the nutritive apparatus assailed, that the case wears rather the aspect of marasmus than phthisis. Either affection, however, being mainly

seated in the pulmonary structure, it proves a local irritant, as I have represented tubercles to do, causing analogous effects,—and hence, the whole become indiscriminately confounded. These I apprehend to be the just relations of this series of essentially dissimilar lesions, with a glimpse of their respective pathologies.

In the cure of phthisis to which we have now arrived, not the least of the embarrassments to be encountered, proceeds from the impossibility of accurately appreciating the means that, at different times, have been proposed for the purpose. Till lately, such was the vagueness of the views of consumption, that particular medicines, as well as general schemes of management, regarding it, constantly prevailed, which, though appropriate to other pulmonary lesions, were utterly nugatory, or hurtful in real phthisis. The same want of discrimination, I have reason to believe, still continues to some extent, and especially, in confounding that of the scrofulous variety with it.

My attention will be mainly directed to the tubercular disease, and I shall endeavour in delivering the treatment of it, to point out the plan, together with the individual remedies, sanctioned by my own experience, or sustained by the authority of the best of the recent writers.

Even when restricted to genuine phthisis, the mode of cure obviously, must vary exceedingly in the several stages of its progress, and also, in some degree, in its modifications.

An allusion has already been made to the opinion of some of the highest of the present authorities, that tubercles being inorganic, no change can be wrought in them by art, and that, the softening or maturative process is demanded for their removal. Not improbably I have said, that this is true. Yet surely, by proper management, the tendency to destructive lesions is sometimes arrested, incompetent as we may be, to their thorough dispersal. Nor of the latter ought we entirely to despair,—since affections of somewhat similar nature, are by remedial measures eradicated. Do we not often effect it, in relation particularly to strumous tumours—and why may we not hereafter in the other instance?

This doctrine is pernicious, and were it admitted, would lead to the neglect of the case, at the very moment, when common experience has shown, that our efforts can be applied with the most certainty of advantage. Though the tubercular mass itself

may be inorganic, and destitute of sensibility to impressions, it is not so with its investing membrance, which is very liable to inflammation, often extended to the adjacent structures.

Before entering on any curative applications, it is of the utmost consequence to determine the exact pathological condition. Either one or the other of two states of the system, though there are less important diversities, will ordinarily be recognized at the early stage of the disease. The first, where with some degree of the sanguineous temperament, indicated by floridness of complexion, soundness of the digestive processes, and considerable vigour of constitution,—there are local pain and oppression, attended by such aberrations in the circulation and increase of excitement, as to amount to a pretty decisive febrile movement. No slight activity of the tubercular development may be reasonably presumed to be going on at this period,—some of the tubercles beginning to be evolved, while others are still further advanced, though none actually softened. With this specific action, there may be also, common inflammation, subacute or chronic, in a part, or the whole of the pulmonary structure, induced by the irritation of the tubercles, or the causes by which they were excited, or fresh exposures to cold, or all concurrently, occasioning, or keeping up the febrile disturbance. That affections of the structures immediately surrounding the tubercles as well as the mucous, cellular and serous tissues of the lungs, are, or may be thus combined with the tubercular disease, is shown not less by the symptoms than the external means of exploration, and has, indeed, been abundantly demonstrated by autopsic inspections.

Convinced of the existence of such a condition, the best means of relief cannot be mistaken. Considerably more than a century ago, venesection was introduced by Dover, the author of the powder which bears his name, who advised that at first, the patient should be bled moderately every day, for eight or ten days in succession, and afterwards, every two or three days, for a much longer time, so that, in some cases, he repeated the operation upwards of fifty times. Dover had been for a term of years in the service of the Buccaneers along the coast of South America, on the quitting of which, he settled in London, where he attracted attention by a bold, original, and sanguinary practice, characterized by some talent, and still more downright quackery. As regards phthisis, many, however, of that, and a successive period,

pursued his course even to ultraism. By thus abusing the remedy, it fell into discredit, and as often happens, the directly opposite practice was adopted. To the late Professor Rush, the credit is due for having restored it so far, at least, as relates to this country, and of regulating it by a sounder discretion.

Need I remark, that in this case, we are to be governed in the use of the lancet by the pulse, the degree of pain, the difficulty of respiration, and other circumstances, which help to a knowledge of the state of the system,—having reference, at the same time, on the one hand to the vast importance of subduing inflammation, and on the other, to the tendency of the measure to hasten exhaustion. Nor are we to forget, that the action with which we have mainly to contend,—though it may be phlogistic, is in part, at least, of a peculiar nature, not equally submissive to the loss of blood. As we find it to be in variola, rubeola, scarlatina, and other analogous instances, so is it here resisted. There is in all these diseases, a specific action, which, however, may be lessened, cannot be altered or entirely overcome by depletion. Experience has so fully taught again and again, the fallacy of those high wrought expectations, grounded on the notion of its decisive efficacy in phthisis, that by many practitioners, it is deemed altogether ambiguous in its effects.

We have, in the case, a perpetual irritant, which keeps up the phlogistic condition, in a greater or less degree, while the former lasts. The vessel of water is boiling, and though partially emptied, what remains, still boils. Yet we prevent the mischief from its overflowings. This is a homely image, serving very well, however, to convey my meaning. Conceding, that the maturative action of the tubercle cannot be entirely subverted, we may possibly in part, abate it, and, it is to be recollected that by extension, it involves other structures, the inflammation of which is by such means, more remediable. The same condition of these parts may also be induced, by other excitants, more especially by exposure to cold, and here, the loss of blood becomes indispensable. As encouragement to venesection, we have the very strong fact, of the effect of hæmoptysis, which duly restrained, never fails to be salutary,—and, indeed, may be deemed as part of the natural process of cure. No one doubts the propriety of bleeding when this event occurs, under the circumstances described, and why not in the condition antecedent to it?

Nevertheless, it must be confessed, that how far, and how often, venesection is to be carried in the first case, are points of practice most difficult to be settled. To bleed, while there is a corded pulse, and sizzly blood, were in many instances, to exhaust the system of its last drop. These are indications, which very obstinately continue. The tubercles still remain, as the thorn of Van Helmet, to irritate and fester the flesh,—leading to general sympathetic or secondary disturbances.

“Hæret lateri lethalis arundo.”—*Virg.*

“The fatal dart

Sticks in her side, and rankles in her heart.”—*Dryden.*

As often happens, this is a case, in which no definite rules can be laid down, and the course must be chiefly regulated by the sagacity, and experience, of the attending physician.

Employing venesection, as far as may be thought prudent, or even contemporaneously, as an auxiliary means, topical bleeding presents itself, which, in the absence of constitutional excitement, will alone suffice, and becomes, in every view, preferable. Depletion altogether, it being desirable to avoid, dry cupping may be substituted,—operating as it does, by diverting the circulation from the lungs to the surface.

Of the utility of setons, and issues, not a little was formerly said. They seem, however, very much to have given place to counter irritation by epispastics, or the tartar emetic ointment, or the croton oil, applied immediately over the seat of the permanent affection, or as is deemed better, by some, to the lower extremities, as a diverticulum. But they answer better in the former position.

As a part of the treatment, it is customary to resort to those medicines calculated to reduce, or keep down, the force of the circulation. The saline laxatives are sometimes prescribed with this intention,—and though possibly beneficial,—any excess in their effects must be carefully guarded against, since active purging is invariably productive of mischief. Content with merely keeping the bowels open, it is a safer course to meet the indication by some other means, among which, is nitrate of potash in free dilution. Half an ounce of this article, in a quart of water, the whole, or greater part of which, to be taken daily, in repeated doses, constitutes in some instances, the most efficient practice

with which I am acquainted. Exhibited thus largely, nitre seems to have the twofold effect of depressing vascular action, and of increasing the urinary secretion. Long has it been known, that impressions of this nature, often prove salutary in the pectoral affections, and on examination it will be found, that many of the best remedies in phthisis, are of the class of diuretics. But the tartarized antimony in minute doses, which undoubtedly has claims to attention, is much more generally directed at this conjuncture, and, I think, answers best, added to the neutral mixture, with sometimes an opiate.*

Not satisfied, however, with emetics in small doses, vomiting has been greatly extolled in this stage of the disease. To operate decidedly, it is said, that it must be often repeated,—and it has even been proposed, to recur to it every two or three mornings, for a succession of weeks, under the idea that the effects of a sea voyage might be partly attained. It is hardly necessary to remark, that admitting its utility, this process, disagreeable in itself, could be borne to such extent, by very few of the subjects of consumption,—and that, it seems to be as much the suggestion of theory, as the result of adequate experience,—though, unquestionably, we have some very respectable testimony in its behalf, as that of Maryatt, Robinson, Simmons, &c. &c. of England, and of Senter of our own country.

Entertaining the conviction, that vomiting, to use the language of a writer, “might in its pervading operation, subdue vascular action, relax the skin, remove oppression, facilitate expectoration, and promote absorption, perhaps of the tubercles themselves,” I tried it some years ago in several cases, and was entirely disappointed, so far at least, as to the main design. The late Professor Physick informed me, that such was the result of his own ample experience in regard to it. Fallen temporarily into discredit, the practice seems again about to be revived. Clarke, among other recent writers, of high authority, urges it,—though on grounds purely hypothetical, and, I really think, not plausible. Espousing the notion, that tuberculous matter is deposited on the pulmonary

* R.—Succin. limon. recent. ℥ij.

Carb. potass. ad saturand. Adde

Aq. font. ℥ij. Et

Acetas morphinæ, gr. ʒ.

The dose, a tablespoonful every two or three hours.

mucous surfaces, which surely is comparatively rare, it is inferred, that vomiting, by the violent succussion given to the body, may detach, and bring it up, as it does the sputa in oppressive attacks of catarrh or bronchitis. Were all this true, of which, however, we have no adequate proof, the remedy would still be applicable to only the very commencement of the disease, and even then, to few cases of it.

No length of time has elapsed, since the confidence of the medical public in the powers of digitalis was almost unlimited. Consumption, even in its last stage, was pronounced by its agency, to be entirely, or nearly so, under our control. It is hardly requisite to say, that these sanguine hopes, and brilliant prospects, have not been realized. Yet it does appear, after making the amplest deductions for the exaggerations of the moment, that digitalis has evinced some valuable properties in the disease. To deny it, would be to discredit, perhaps, the strongest evidence ever presented in favour of any medicine. That I might determine how far it is worthy of reliance, by a just appreciation of its efficacy, I have traced in my work on Therapeutics, with some minuteness, the progress of medical opinion relative to its powers in pulmonary consumption. Notwithstanding, however, the detail in which I have indulged, I do not know that I have succeeded in my object,—the particular forms or states of the disease, still not being very clearly made out, to which the article is adapted. Much, after all, must be left to the judgment of the practitioner, and that capacity of discrimination, alone to be acquired by observation and reflection. Yet I have there said, that it seems at present, to be generally admitted, that it is only useful in the early stages of the disease.

Even then, however, it proves precarious, and not seldom is manifestly injurious, by prostrating strength, and accelerating the catastrophe. Like some other articles of the *materia medica*, digitalis seems, in many instances of consumption, to exchange its *medicinal*, for a *poisonous* action;—and whenever this happens, it is most baneful. Nevertheless, every practitioner has, probably, been now and then surprised by effects so strikingly salutary from the medicine, that his confidence in it becomes once more revived, and, thus encouraged, he proceeds with its use, till, by the frequency of its failures, or the harm it occasions, it is again abandoned in disgust and despair. No doubt, some of the

uncertainty of the article, may be ascribed to the vague and indistinct notions entertained with regard to consumption—including under one general denomination, which is still too commonly done, affections of the lungs, that, both in their nature and treatment, are irreconcilably opposed.

As the result of no slender experience with digitalis, I am prepared to state, that the only case of phthisis, in which it can be much relied on, is the incipient stage, usually attended with a slight hæmoptoe,—small, quick, irritated pulse, extreme mobility of system,—short impeded respiration, and hard, dry diminutive cough, where venesection, and other evacuant means, are precluded. By subduing irritation, and regulating vascular action, it sometimes proves advantageous,—and though even here, it will frequently disappoint us—still in the management of such a case, it is one of the resources which ought not to be overlooked.

Nearly with similar views, has the prussic acid been applied to the cure of consumption. Not many years ago, its virtues were promulgated by Majendie, and other French writers, in a tone of extreme confidence.

Encouraged by these accounts, it has been pretty extensively employed, more particularly in Great Britain. But as generally happens with new remedies, there is great contrariety of opinion among practitioners, as to the precise nature of its powers, and the degree of its efficacy. Most of the physicians of this city have used it, and so far as I have been able to ascertain, without having their hopes from it at all confirmed.

My own experience with it is limited. But I do apprehend, that there is great enthusiasm in the representations which we have had of its utility, and that, as to genuine consumption particularly, though it may sometimes palliate distress, it must be added to the catalogue of remedies in that disease, which have so often come forward with “bloated promise and lank performance.”

Turning from these evacuant or depressing means, we are presented with another plan of treatment, more directly intended to resolve and disperse the tubercles. Many articles have been tried with this view, and among them mercury especially, which, from its well known deobstruent and revolutionary power, seemed to promise most in this instance.

Not very long since, it was greatly extolled when urged to a

salivation, in this, and indeed, in every other stage of the disease, by our own practitioners. That it has been occasionally successful in chronic pulmonary affections, can hardly be denied. From within my own knowledge, or which are on record, it were easy to collect a very considerable number of instances of such, supposed to be removed by it.

No one of these however, I am persuaded, was genuine tubercular consumption. Never have I had the good fortune, to witness a single cure of this form of disease, or to know of one well authenticated, though in private practice, and that of the public institutions I have attended, mercury was employed by myself or others in several hundred cases. It will indeed sometimes even in small quantities, and uniformly when it salivates, operate poisonously, as I have represented digitalis to do,—subverting health, and breaking down, as it were, the very fabric of the constitution.

Nay, it was exceedingly common at the period when the practice now deserted, was prevalent, to see individuals—though menaced by the disease, still in tolerable health,—going about transacting business, or moderately indulging in social recreations, who, persuaded to undergo a mercurial course, speedily sunk under its fatal influence. To the correctness of this statement, I believe an enormous mass of medical testimony might be commanded in this city, and perhaps throughout the country. Yet the practice never before adopted, appears now to be acquiring support in Europe, and particularly among the disciples of the Dublin school. Not questioning the veracity of their reports of its success, I am led to suppose, it must have been in cases of the strumous, or some other of the illegitimate varieties of phthisis.

The appropriateness of mercury I do not doubt to certain states of chronic catarrh, chronic pleurisy, and chronic pneumonia, with some other similar pulmonary affections, in an otherwise sound condition. Excepting however to rectify a depraved state of the chylopoietic viscera, with which tubercular degenerations may be complicated, and here the blue mass, if circumspectly directed, is useful, I must insist that mercury is detrimental in every stage, and under every circumstance of genuine phthisis pulmonalis.

During the season, when such sanguine expectations were indulged, as to its control over this horrible disease, it came, as just

mentioned, to be generally and indiscriminately prescribed. The consequence was, it produced so much harm that we were deterred from its use, so that at present, it is nearly abandoned, where it is undoubtedly serviceable, even by those who formerly placed the utmost confidence in its power. Even the late Professor Rush, by whom the use of mercury in phthisis was restored, and who did so much to establish its reputation, as well by the force of his authority, as by the publication from time to time of cases of its wonderful efficacy, was among those who rejected it, and candidly proclaiming the mistake he had committed, ran into the opposite extreme, or of detestation of the remedy.

Taraxacum, and the gum ammoniac, and sal ammoniac are also articles which, as deobstruents, so lately as my own time, were largely directed in the disease, with however no beneficial results, except, perhaps, to the improvement of biliary secretion, or the promotion of expectoration.

From the alleged success of iodine in the resolution or dispersal of various tumours, and organic obstructions, several preparations of this article have, from analogy, been applied, with the same view, to the removal of tubercular masses. Doomed, as it were, however, to a failure of our endeavours, in this disease, no advantage has accrued from the remedy, and, perhaps, it may be affirmed, as the result of experience, that whenever it operated decidedly, it proved detrimental, by the exasperation of excitement, sometimes to actual fever,—followed by a degree of emaciation amounting to marasmus.

It remains to make a single remark on the regimen in this state of the disease. It ought obviously to be such, as to harmonize with the general design of reducing action and tranquillizing the system, and accordingly, to consist in the lowest diet, with rest and quietude of body and mind.

It may be perceived that the management I have proposed of the early stage of phthisis, is constituted in all its parts, of the antiphlogistic or sedative measures. But very different views have been, and are held on the subject. Debility being considered as essential to the disease, this plan is condemned, and the active means of corroboration, exclusively employed, which in a word, are a generous diet, constant exercise, and the medicinal tonics. What seems more especially to have led some to such practice, and by which it is now vindicated, is the supposed

identity of scrofula, and the tuberculous condition. But admitting the truth of the allegation,—which as seen, I am not disposed to do,—the conclusion drawn from it, is not correct—for in scrofula itself, where general or topical excitement prevails, the opposite course is only proper.

The error is, in not properly accommodating the practice. . It was remarked preliminary to entering on the treatment, that consumption may be presented in a state of system, very different, or indeed directly the reverse of that I have just considered. There is here some attenuation of frame, muscular weakness, nervous irritability, feeble and quick pulse, pallor of countenance, soft flabby integuments, disorder of the nutrient functions, with the general phlegmatic aspect, and it is to such cases, that the invigorating and restorative measures are adapted.

Even on these occasions, however, depletion and other means of reduction, cannot wholly be dispensed with. Exasperations of the case will occasionally arise, from exposure to cold, or other causes, where the loss of blood, and the antiphlogistic course, are generally exacted. But topical bleeding or dry cupping, counter-irritation, and a lowered diet, with rest, for the time being, will mostly suffice, and should be preferred. Not called for, by such occasional pathological conditions, the more we forbear the use of depressing remedies the better—as the recuperative powers are feebly exercised, and recovery slowly or often never takes place, from their effects. The great object in this form of the disease, should be to preserve or restore soundness to the digestive and nutritive functions. Adopting this as a guiding precept we shall escape many of the errors hitherto committed, and perhaps accomplish nearly all which our art at present allows us to perform. Essentially the same, as in ordinary dyspepsia, in the most comprehensive sense of the term, I shall not now weary attention by any specification of the practice.

In giving to the course I have recommended in the more active form of the disease a preference, I am very far from being influenced by theoretical views,—though it certainly corresponds with my general principles. The opposite one I have seen fully tried, and know, that it will not answer under such circumstances. Neither however is deserving of any great confidence, and treat the disease as we may, with the utmost sagacity, and apparently

the nicest practical adaptation of means, our expectations of success will too often be deceived.

Humiliating as it is, it must indeed be conceded, that we sometimes even do harm by any interference in this disease. Consumption is in some cases, a species of "*Noli me tangere*," which, unwilling to be touched, is only prejudiced by our well meant efforts. Depletion exhausts strength, without altering, or in any way relieving the morbid action, and opposite means exacerbate it to a height, no longer to be subdued, so that, by either course, the catastrophe is expedited.

Greatly do I wish it were in power to designate these rebellious states of the disease. Every candid practitioner will readily confess his inability to do it, and deplore his want of discrimination, and the impotency of his resources. In making such a statement, I do not intend to dishearten. My object is only to declare, that though our exertions, properly directed, sometimes prove successful, we ought to be prepared for disappointment and mortification.

Laennec, however, as we have seen, holds out the language of encouragement, and in which many coincide. "To conclude," says he, "I think the cure of consumption, where the lungs are not completely disorganized, ought not to be looked upon as at all impossible, in reference either to the nature of the disease, or the organ affected. The pulmonary tubercles differ in no respect, from those found in scrofulous glands, and we know that the softening of these latter, is frequently followed by a complete cure."

This statement, though erroneous, is not destitute of plausibility. The parallel between tubercles and external scrofulous tumours, may be run to a certain extent. The latter, in the beginning, are sometimes dispersed,—when much inflamed seldom,—and maturation taking place, and the vitiated mass thereby removed, the healing operation commences, and a cure is often effected. Nature, under these circumstances, accomplishes what we design to perform in some tumours by caustics or escharotics,—eating out, and destroying the entire substance. There is too, the same liability to return by a fresh development. Exposed to the influence of adverse seasons, or other causes, the predisposition enduring, we have a renewal of the morbid process in both instances, till finally, in the more inveterate cases, hectic fever, with its consuming effects, is induced and death results.

But specious as this seems, it will not bear a critical scrutiny. The fallacy consists in the assumed identity of the tuberculous and strumous tumors which differ in this, among other particulars, that the former are altogether an extraneous production, and the latter a degeneracy of a lymphatic gland. The one is a new creation of an irregular nutrition, while the other is a diseased growth of a natural pre-existing organ.

To scirrhus may tubercles, I think, be more justly compared. Deposits of matter in each instance takes place, forming tumeroid masses, which pass through similar changes, ultimately ending in a species of ulceration, having little or no inclination to heal. They equally resemble each other in the striking feature of the local affection being the effect, and not the cause of the general contamination of the system, so that were it possible to effect a cure of the former, it would be temporary, unless the latter could be removed. The late Professor Physick was so deeply impressed with the correctness of this view of scirrhus, that he told me a short time before his death, he had for some years abandoned the excision of such tumours from the female mammæ especially,—his enlarged observations having taught him, how utterly nugatory was the operation.

Distinct, however, from these speculative objections, the alleged curability of matured tubercles is refuted by experience. Melancholy is it to reflect, that at the very moment when Laennec was inditing the passage which I have cited, so full of inspiration, he was far advanced in the disease of which he soon fell a victim, despite of all his hopes, and the long and profound investigation he had given to the subject.

Nevertheless, it must be acknowledged, that writers of such respectability, as not to be disregarded, continue to lend support to the same illusion. Especially is it alleged by them, that where a single tubercle takes on the maturative action, it may occasionally heal, and in proof of it, cicatrices are said to have been actually detected. Many, however, and among others myself, do not acquiesce in this statement. Louis declares, in the thousands whom he dissected, he never saw a cicatrix, and I cannot hear of any instance properly authenticated, which has occurred to the numerous cultivators of morbid anatomy in this city. Most of the cases reported, were confessedly the sequelæ of cretaceous concretes, not certainly tubercular, and even those claiming to be

of the latter character, are really, as described, of an extremely dubious aspect. Even Andral's, which I deem the most imposing, are far from satisfactory.

Before the fact is admitted, we must have a clearer demonstration of it than hitherto received. Let the cicatrix, its position, and the state of the surrounding tissue and lung as regards other tubercles, the existence of any or not, be all accurately presented. As yet, we hardly know what are the criteria of the cicatrix from a pulmonary excavation, so differently has it been represented. More am I distrustful of its existence, from the uncertainty on these points, and I may add, the want of agreement, as to the mode in which it takes place. Every explanation of the healing process is bungling, and absurd.

Fourney, one of the latest of the French writers, while he concedes the occasional curability of phthisis, denies that it is by healing of the cavity, and of course, no cicatrix forms. He on the contrary believes, that such cures are accomplished by the conversion of the cavity into the fistulous state, and not by its closure in any way. Examples of this kind, with protraction of life, at least, I shall presently give.

Granting, however, that cicatrices have sometimes been met with, I should infer, till the fact is better established than at present, that not tubercular, they were the result of some totally different lesion, and particularly of a strumous lymphatic gland. But what, after all, would be gained by the amplest concession to my opponents? They do not deny that the happy event for which they contend, is of the rarest occurrence, some *solitary oasis*, a spot of verdure, amidst the widest expanse of dreary desolation, "where no vegetation thickens and no flower blooms!" Diffidently do I suggest these views, and wish them to be received, rather as hints for further and more accurate investigation of the subject, than as any thoroughly grounded opinion of my own.

But though not absolutely cured, there is a case which may endure for a very lengthened period, and sometimes, without any serious detriment to health. It consists in the formation of a long narrow fistulous cavity by the intercommunication of several tuberculous excavations,—lined with an adventitious membrane, secreting pus, the residue of the lung being sound. Exempt from irritation, or perhaps, the system becoming familiarized to it, no hectic fever here exists, and with cough, and very copious puru-

lent expectoration, the individual suffers comparatively little from it.

Two remarkable instances of the kind have I known. Formerly, there was in this city an eminent lawyer, who at an early age, had an attack of supposed phthisis, from which he recovered, so far as to enable him to pursue his profession laboriously, as an advocate, for probably forty years, during which time, however, he expectorated pus most abundantly, and with the exception of that, and a teasing cough, seemed to experience slight inconvenience from the lesion,—for though of an attenuated frame, he possessed considerable muscular power, and was notorious as an enormous eater, drinker, smoker, and by other debauched habits.

Contemporary with this Heliogabalus of a lawyer, we had among us a physician, of extensive practice, whose labours were even more numerous, since he was chiefly engaged in midwifery. Yet he too, for quite an equal period, expectorated pus without intermission, sometimes amounting to a pint daily. The other parts of the case resembled the preceding, save that the accoucheur was temperate in every way. Both individuals died in advanced life, and on dissection, the appearances were exactly such as I have described. Even here, however, there is much reason to suspect the strumous, and not the genuine tubercular condition existed.

The want of success in the advanced stage of consumption, while owing to inherent difficulties of a very formidable nature, may, perhaps, too, be attributed to ourselves, in some degree. The tuberculous excavation or ulcer of the lung, if it may be so called, which constitutes the worst state of consumption, has been said, must necessarily be intractable in the cure, from the loose, or parenchymatous structure of these organs, as happens in all parts made up chiefly of cellular texture,—that, the difficulty is increased, by the movements of the lungs in respiration—keeping asunder the sides of the lesion, or otherwise disturbing the healing process, and that, the constant exposure of the surface to the air inhaled, as in all other ulcers, proves most injurious in this respect. Despite however of these impediments, we do know, that wounds of various kinds, of the lungs becoming suppurated, often heal, and without much delay or trouble. To this purport, we have the evidence of many practitioners, and especially those who have been attached to armies, or navies, in active service. Nor do

lesions in other chronic pulmonary complaints, even the abscess of pneumonia, prove by any means so unmanageable.

It hence follows, that the obstacle to the cure of the case before us, must be assigned to some peculiar causes, among which the most operative, is the phthisical diathesis. Not a few of other constitutional states impose similar, though not all of them equal difficulties, the strumous, the venereal, the mercurial, the scorbutic, the cancerous, &c. Even common ulcers, in a crowded and ill ventilated hospital, from the bad state of system induced by the foul air, will be refractory or relentless, to the best treatment.

But as regards the phthisical excavation itself, there is a peculiarity which interferes with its healing. Nearly always it is lined with a false membrane, and is sometimes sinuous, each of which circumstances, is preventive of granulations, the first step to the filling up of an ulcerous cavity, and without which there can be no cicatrization.

To a further consideration we have to advert. Consumption is not limited to lesions of the lungs only. In the stage now under review, the whole corporeal frame is sometimes pervaded by the distemperature,—tuberculous degenerations existing in a greater or less degree in every part, so that could we repair the pulmonary injury, the depravation of other structures might sustain the hectic irritation and baffle our efforts. Examples have I frequently witnessed, where the suffering of the lungs originally trivial, or becoming so, the prominent affection was of the stomach or bowels, or of the liver or mesentery or peritoneum &c., some one or more of which, abounding in tubercles, presented a case with the genuine consumptive physiognomy.

To reinstate the order of healthy action in this disease, we must acquire some remedy or remedies, commensurate in their impressions with the wide-spreading disordered condition,—effectual to its correction or removal. Discovering some means as decisively controlling as mercury was represented to have been, over the ancient forms of syphilis, then may we reasonably felicitate ourselves with the prospect of success, in overcoming in like manner, this now, one of the most indomitable of diseases.

Notwithstanding, however, what I have said, it seems to me, that for the disreputable failure of our practice in phthisis, we to

a certain extent as previously hinted, are responsible, from the indistinct notions entertained concerning the subject.

Till lately, it has been our misfortune to include under one general head, a great variety of pulmonary affections, and to apply without any or much discrimination, the same description of treatment to the whole of them. My deliberate conviction is, that out of this vague and sweeping generalization, vast mischief has arisen, and that among the first steps to reformation, in both our theoretical and practical views of the subject, is to contemplate it, as it exhibits itself, in its more minute and individual aspects. Let it be separated from chronic catarrh, bronchitis, pleurisy, pneumony, and as differing scarcely less from it, in nature and treatment in several particulars, from the imitative scrofulous affections.

Entertaining, however, the most desperate estimate of the case, common humanity, as well as a sense of professional duty, requires that we should not withdraw our endeavours. What we cannot cure, may be palliated—and it is always right, that the means most approved, should be fairly tried.

Considering an ulcer, in the average of these cases, at this stage, as existing, the views of practitioners have been directed to the healing of it,—and, under the impression of its strumous nature, it was, for the most part, accordingly managed. Correctly speaking, there is here no ulcer. An emptied tubercle leaves behind it a cavity as formerly described, on which the title excavation is conferred.

Guaiacum, mezereon, sassafras, and above all sarsaparilla, single or combined, with antimony or mercury, have been much prescribed, though, I fear, with little or no advantage. Nor has more been gained from sulphur, or arsenic, probably used with the same intention as the preceding articles, and, once commanding a large share of confidence.

Every variety of tonic, as the Peruvian bark in all its preparations, and the chalybeates particularly, as well as the whole of the vulnerary articles, including the terebinthinates, and balsams, were equally employed, and with no better effect. The same remark may be applied to the narcotics, opium, cicuta, henbane, the several nightshades, &c.

My success in healing external scrofulous ulcers, with the nitric acid, led me at one time, to hope, that it might here prove effica-

cious. The encouragements of the moment, however, were speedily dissipated, and I can no longer press it on attention. Even in scrofula when seated in the lungs, we shall have such difficulties to encounter, as to render it intractable to the ordinary remedies. But I repeat, that the doctrine of the identity of the two states, is not true, and that hard as it is to cure strumous consumption, still less remediable are the cases, dependent on the real tubercular diathesis.

Easy were it to enlarge the catalogue of remedies to any extent, which, at different times, have been proposed in this disease, did I attach any value to them—some long since repudiated as utterly worthless, and others too recently ushered forth to have any established reputation, or so obviously absurd as not to deserve a trial. Backed, however, by a host of authority, regular, and popular as one of the latter description is, it ought not, perhaps, to be passed over, without a remark. To the *cod liver oil*, or to give its more sonorous title, *oleum jecinoris aselli*, reference is had. Finding it most horrible in odour and taste, never have I ventured to use it, and do believe, that no stomach could retain it for a moment, except that of the Esquimaux or some other savage, accustomed to feed on putrid fish as a delicacy—and such is all I know, or care to know of this odious nostrum, deemed by so many, an important acquisition. Much in the same light do I view and appreciate the still newer suggestion of the *naphtha*, an equally hideous article, in the cure of the disease.

Disappointed in all internal means, the practice has once more been revived in Europe, and in this city, of attempting to heal pulmonary lesions, by the fumes of certain balsamic or other articles, for a full account of which, I refer to the section on Inhalations in my Therapeutics. The exact degree of benefit derived from these particular fumes, I cannot determine positively. My own trials have not been satisfactory. More than one of my medical friends, however, speak favourably of them, and I am not disposed to controvert or deny their statements, corroborated as they are, by some other very strong testimony from elsewhere. Yet I cannot help suspecting, that the relief afforded, has been in chronic catarrh or bronchitis, with purulent expectoration, and not genuine phthisis;—though it is affirmed by Creighton, that he entirely relieved several cases where pectoriloquism prevailed.

To the vapour of tar he ascribed this credit, used by placing the patient in a room, the atmosphere of which was thus impregnated.

Two new articles have lately been added to the stock of this class of remedies. The first of these is the vapour of iodine, very confidently proposed by Scudamore as even a cure for the disease, supported by the evidence of numerous cases—and the second chlorine, or rather a solution of the pure gas in water, which comes forth more especially on the authority of M. Ganai, whose recommendation of it, is also sustained by many proofs of its decided efficacy.

Each of these fumes I have repeatedly tried, and though I cannot say that I ever accomplished even an approximation to a cure by them, I am persuaded, that they are deserving of some attention. Moreover, the vapour of the chloride of lime has been fully used by me, which as equally, or perhaps more efficacious, and being prepared with greater convenience, is, on the whole, to be preferred. Though this practice may not do more, it often allays cough, facilitates expectoration, diminishes or corrects purulent, and other secretions, abating at the same time most sensibly, hectic irritation, and hence appears the best suited to the affections of the mucous surfaces of the windpipe, and its ramifications. Yet there are cases with an excess of irritability of this structure, in which it is not tolerated, and if persisted in, is evidently productive of harm.

Experiments of this nature ought to be repeated with every variety of substance, seemingly adapted to the end, as one of the modes in which we shall most probably attain to a control over the pulmonary lesion. Experience has taught, that this cannot be done by impressions through the stomach, by the means of which we are possessed.

Difficult always to heal ulcers by general remedies alone, it is particularly so in the tubercular excavation, as the stomach and lungs do not sympathize in the disease. It is one of the peculiarities of phthisis to subvert in a very remarkable manner, the ordinary ties between these organs. The former viscus in numerous instances remains unaffected, till a very advanced stage, the integrity of its functions, being not apparently impaired. Even when the lungs are decayed we often find the appetite good, the powers of digestion as vigorously exerted as in health, with the hilarity

and cheerfulness incident to a sound stomach. The maxim of such wide application as regards that organ, does not apply here:

“Sanis omnia sana.”

But on the contrary, from a dissolution of the consent of parts, the effect is, that remedial impressions made on the one, are not extended to, or adequately felt by the other viscus, and consequently attempts of the kind are marred or rendered wholly abortive. Nothing in this aphorism is incompatible with the doctrine formerly inculcated, of tubercles originating in a false or depraved nutrition, for reasons then assigned—the complication of the apparatus by which the function is performed, the latter being affected by disorder in any part of the former, whether it relates to the beginning, the intermediate, or final stage of the catenated series of operations, in which it consists.

On a principle not altogether dissimilar, the inspiration of atmospheric air variously mixed with the irrespirable gases, was about the close of the last century suggested, and to give it a fair trial, Beddoes established at Bristol in England, what he called the *Pneumatic* Institution. It was proposed especially, to inhale diluted carbonic acid, under the supposition, that it might correct the foul ulcers of the lungs, and dispose them to heal. But however plausible in speculation, it totally failed on trial.

These enthusiasts likewise suggested that the consumptive should inhale the vapour from a cow, and to do which, the more completely, to live with the animal by day and by night. Ridiculous as it may seem, several cases are said to have been cured by this practice, one of which was the daughter of the celebrated Priestley, as attested by himself to me.

As lending some support to the above statement, the fact is appealed to, of butchers, catgut, glue-makers, and all others habitually exposed to animal exhalations, being nearly exempt from consumption. The same is said of tanners, whose immunity is ascribed to the breathing of the effluvia from the mixture of the animal and vegetable matter of their pits,—and, hence, a subjection to it has been proposed in the disease, by placing a vessel filled with it in a room. That a notion of its efficacy in pectoral affections is not new, as supposed, appears by its being a very old remedy in pertussis.

To do away the impediment to the healing of a pulmonary lesion, which has been thought to exist in the unremitting motion of the lungs in respiration, a puncture into the thorax was some years ago practised in England, which we are told proved successful in one instance, where the lung collapsed, and remained quiet. But independently of other objections, it very often happens, that the lung is so fastened by adhesions, as to prevent its collapsing, and of course, to render the operation nugatory. It was this, which chiefly discouraged the late Professor Physick, with whom the suggestion originated, from carrying it into execution.*

Connected with this stage of the disease is hectic fever, so exhausting in its effects, that to remove or mitigate it, becomes an important consideration. It may be paroxysmal or irregularly continued. Decidedly of the former type, it resembles very closely ordinary intermittents, and the treatment of the two affections has long been so far assimilated as to have led to the use of pretty nearly the same remedies;—the most prominent of which, are the preparations of the Peruvian bark, the cascarilla—and of the mineral tonics, arsenic, sulphur, the acetate of lead, the sulphates of copper and of zinc, &c. &c. Distrusting the whole of them, and actuated by a laudable spirit of discovering some adequate means for this purpose, a distinguished physician of London engaged, some time since, in a series of clinical experiments.† Besides the articles previously in use, he tried the nitrate of silver, —the white oxid of manganese, the black oxid of cobalt, and vinegar, of the whole of which, he thought the latter article preferable. Except the sulphate of quinine, in combination with the elixir of vitriol, I have found it so after a pretty extensive employment of it. The common prescription is two ounces of distilled vinegar in eight ounces of water sweetened, of which, a tablespoonful may be given every two or three hours.

In the management of the more continued form of this fever, the most striking peculiarity of which I am aware, is the freer use of opiates, and other sedatives, and especially the former,

* Many years prior to the date of the case to which I have alluded, Dr. Physick proposed the operation to me in consultation, which was waved for the reason assigned.

† Dr. Roberts, Lecturer on the Practice of Physic, St. Bartholomew's Hospital.

in union with the neutral mixture, or the nitrate of potash, to which may sometimes be added advantageously, a modicum of tartarized antimony, exhibited at stated intervals. But, whatever may be its precise character, it is to be recollected, that the pyrexial state is entirely secondary, dependent on some permanent source of irritation, and consequently, its thorough cure can only be accomplished by an eradication of the cause. Emphatically this is the "*hoc opus*," and where our efforts are confessed to be nearly nugatory. But we can sometimes suspend, or mitigate it by an opiate in anticipation of the paroxysm,—by moderate bleeding and cooling medicines where such means are indicated during the fever—and in the apyrexia, phlogistic action being well subdued, by the tonics of antiparoxysmal properties, especially the sulphate of quinine, aided by the exercise of riding, and the freest exposure to the fresh air of the country.

Certain local affections, incident also to the advanced stages of the disease, have the strongest claims on our attention. They are, however, chiefly the consequences of hectic irritation or intimately associated with it, and the general management of it essentially the same. Of these affections, very troublesome are the night sweats. As proceeding immediately from debility of the exhalents, they are sometimes checked by exciting this system of vessels. By sleeping in flannel, I have known such an effect to be produced, and especially if the surface be rubbed with some stimulating article. The best application is a solution of alum in brandy,—a drachm to half a pint, rubbed on warm. To the same end Bayle urges a hot bath; medicated with some stimulating article.

Of internal remedies, we have several very much prescribed, though, perhaps, the best are the mineral acids, particularly the diluted sulphuric acid, alone, or with an infusion of Peruvian bark, or some other vegetable tonic or astringent. The alum, the sugar of lead, the arsenic, have also been advised. Now and then advantage is derived from the prepared chalk, or oyster-shell, or lime-water, freely taken, and I have known the mild diuretics, such as eating of watermelon, or drinking parsley tea, or soda water, to afford relief. The mode in which they here operate, is in the diversion from the cutaneous surface to the kidneys. Moreover, the sweats are sometimes suspended, by strongly exciting the exhalents, by the active diaphoretics. The practice

however is of doubtful utility, and is rarely employed, though cases may still occur, in which it might be warranted. Diarrhœa is in some instances checked by purging, and on the same principle, diaphoretics might be found useful in excessive diaphoresis.

Concerning the colliquative lax, another of these affections, it is proper to state, that purging at this period of the disease, is exceedingly prejudicial, by the exhaustion it so rapidly induces, and ought therefore, to be checked as promptly as possible. To note this, is the more important, since diarrhœa at the close of the disease, is apt to suspend the cough, and to alleviate so sensibly some of the other symptoms, that without being apprised of its insidious consequences, the patient, as well as the practitioner, might allow it to run on to a dangerous extent. But all which we can do, is to suspend it. Dissections show, that it generally depends on ulceration of the stomach or intestines, which as a part of the general disease is incurable. We are told by Bayle, that sixty-seven out of one hundred patients presented these appearances, and our dissections show that he has not exaggerated the proportion. It is to be managed very much on the principles, and by the remedies of atonic diarrhœa from other causes. An anodyne injection, repeated morning and night is, however, on the whole, the best means when it is profuse.

The cough, which, throughout the case, is usually harassing, now becomes much aggravated, and calls urgently for relief. The mixtures usually directed in simple catarrh, and catarrhus suffocativus, are here equally applicable. Commencing with the milder articles, we ultimately resort to those more stimulating or active. Combinations of the several demulcents, as liquorice, or gun-arabic, or slippery elm,—the syrup of horehound, and afterwards the squill, and the gum ammoniac, or the balsams, tolu or copaiva are most employed. But the chief reliance must be on opium, alone, or variously combined. It accordingly enters largely into the cough mixtures, of whatever material they may be composed, and can seldom, if ever, be dispensed with. Where it produces no permanent benefit, it alleviates the more distressing symptoms, and secures the only comfort at this moment of complicated affliction. Not the least efficacious of its preparations, is the acetate of morphia, and one of the modes of using it, in some instances, is endermically.

Dyspnœa being very oppressive, and expectoration difficult, or restrained, from the adhesiveness of the sputa, the inhalation of the mildest vapours may afford relief. But when attended by pain or tightness of the chest, and some increased activity of the circulation, inflammation of the substance of the lung or its membranes, which is so apt to take place, at this period, may be suspected, and then, cupping, more frequently dry cupping, or a blister becomes the proper remedy.

Œdematous swellings of the lower limbs, with a painful sensation of burning heat, may be palliated by washing the part with warm brandy, or by bathing it with oil and laudanum. When admissible, the loss of a few ounces of blood gives temporary relief to both affections.

An aphthous ulceration of the mouth and throat, which is a pretty constant attendant on the close of the case, is either very irritable or not at all so.

Mild lotions or gargles, as lime-water and milk, or barley-water, or the almond emulsion, or honey and water, or laudanum with some demulcent, are to be resorted to in the first, and in the second instance, the more stimulating and detergent—the borax, myrrh, bark, &c., the latter in lime-water.

The protection of the external integuments, is the last circumstance requiring our interference. These at the points on which the body rests, become inflamed, then excoriated, and finally ulcerated, occasioning great suffering. Covering the parts with some saturnine plaster, is the best preventive, and when the injury takes place, a cushion with a hollow in the centre so that the parts surrounding the sore may rest on the brim, should be interposed.

The regimen adapted to the advanced stage of the disease must be varied by the state of the system, and the predominance of certain affections. Diarrhœa or cough prevailing, the farinaceous and mucilaginous matters, particularly the Iceland or Irish moss, constitute a very appropriate diet, and under most other circumstances, milk or eggs, or calves-foot jelly or oysters, or any other light animal matter, with perhaps wine or malt liquor, in moderation. Carriage exercise in temperate weather if there be strength to bear it, should be taken,—though so moderately, as not to induce fatigue, or excite fever. To act contrarily as to food or exercise, under the impression of renovating strength, is alike fallacious

and detrimental. Not less preposterous were it to fill a decayed store-house with heavy materials, or attempt to move it in this condition with a view of giving to it strength or solidity. The object in either case can only be met by previous reparation, and to attempt it without this being done, is to hazard at once a general crush of the shattered fabric.

With this I conclude the medical treatment of the disease. No just confidence can be reposed in any one remedy or plan hitherto suggested, and for the most part, all which is left to us to perform is to soothe or mitigate the severity of the symptoms as they arise. Why then, it may be demanded, waste time in so elaborate a criticism on a subject, tending to such trivial practical results? My reason for it was to show, that certain articles still highly valued by many, are really worthy of little or no regard. Being incapable of doing good, they do harm, of which, I have had the most ample proof, and, therefore, they should be abandoned. Can it indeed be questioned, that thus drugging the stomach, together with divers other modes of appliances of exceedingly active agents for months uninterruptedly, must be productive of positive, and multifarious mischief. Convinced of it as I am, to guard against the perils of a course hitherto not always honestly indicated or proclaimed, for how generally is it still pursued, I now hang out as warnings, the beacon lights!

For nearly half a century, I have been connected with the profession, and seen, perhaps, as much of the disease as any man living, with all the diversities of treatment, under my own direction, as well as that of some of the most eminent practitioners of Europe, and this country, without having witnessed a cure of a case when confirmed. From extent of experience, I am entitled to be heard on the subject, and such is my report. The knowledge of the fact, of the utter incurability of phthisis, in the advanced stage, ought to be widely disseminated. It may awaken a sense of the danger of delay in the application for relief,—our reputation will be vindicated where no expectations are raised,—the confidence reposed in those impostors who profess the skill to manage it, become destroyed,—and, lastly, the already sufficiently wretched individuals, be spared the affliction of a course of pretended remedies always aggravatory in their effects, so far as I have observed. This is one of the diseases, on which quackery has, at all times, fastened. No longer, however, confined to the

low, the vulgar, and illiterate, we have now, instances of similar artifices being pursued by educated practitioners, who, seduced by the temptations of gain, prove recreant to every obligation due to professional or private morals. Not the least conspicuous of these, is a regular graduated physician of this city, formerly quite respectable, at present, the degraded charlatan, professing to cure consumption by means the most preposterous which he knows to be pernicious, and practises merely to get money.

Genuine phthisis proving thus incurable, it is one of our highest and most sacred duties to adopt the means of its prevention. In the discussion of this part of the subject, reference must be had to the antecedent state or tuberculosis, as well as to that, where the tubercular degenerations have already though slightly taken place. Much of the management, however, will be found equally applicable to each condition. As regards the first, it is evident, that all those circumstances which conduce to the evolution of an hereditary taint, or predispose to the formation of the phthisical diathesis, are to be studiously counteracted. These need not again be indicated. Be it however remembered, as remarked by an excellent writer, that under the very worst circumstances, even of a transmitted susceptibility, it is at this period only a susceptibility, latent or passive, requiring the influence of some cause to arouse it into action, and hence restrainable by the avoidance of such cause, equally keeping in view, at the same time, the important fact, that the foundation of the disease may be early laid. Numerous are the instances, where the seeds which vegetate at the season of puberty, or more advanced life, are sown in infancy or childhood. The prophylactic system cannot, therefore, be too soon instituted. Easy may it be to prevent the germination, and difficult,—perhaps, impossible to exterminate or even to control the subsequent growth.

“Principiis obsta sero medicina paratur
Cum mala per longas convaluere mora.”—OVID.

Let the disease be at once attacked. Medicine, by any delay, becomes unavailing.

Every thing here depends upon the preservation of a sound nutrition, and the means by which it is to be effected are mainly embraced within the scope of a well devised physical education. To give the minutæ of such a code, were alien to my purpose,

and incompatible with the limits assigned me. Little more, indeed, is allowed, than merely to state, that commencing at birth, the course is steadily to be pursued, and that the leading object to be kept in view, is, the regulation of diet, clothing, exercise, the indulgence of fresh air, with whatever else is calculated to cherish or sustain, and corroborate the stamina of the constitution,

Nearly as important is it with this view that the mind should be left free and untrammelled, and particularly by the imposition of scholastic duties, and the inseparable cares, anxieties and worriments. Few perhaps adequately appreciate the vexatious and harassing troubles of this kind, experienced in early life, or how deeply they affect the health of the delicate and valetudinary. Directly, as well indirectly, do they contribute to this end. For a child at a season, when there is the liveliest sense to amusement, and even an instinctive demand for the enjoyment of it, and of corporeal exercise, to be enclosed in a school for most of the day, and the evening no less appropriated to the acquisition of tasks, which a dread of shame or of punishment, impels him to accomplish, is surely a plan replete with mischief. From the pernicious effects of intense study, and still more, should it be involuntarily and painfully conducted, no age or vigour of constitution entirely escapes with impunity. Dyspepsia, and depraved nutrition, are the habitual infirmities of literary men, too often ending in pulmonary lesions, and if depredations are thus committed on the matured and robust constitution, the extent of the evil must necessarily be infinitely greater, under circumstances, where the capacity of resistance is comparatively feeble, or perhaps wholly wanting. Notwithstanding however the obviousness of the pernicious consequences of this system and the protestations of medical men against it, all is disregarded, in compliance with vulgar and mistaken views, which are increasing in force and extent truly alarming.

In those instances of extreme vitiation of the nutritive operations, approaching the state of anemia, much advantage may be anticipated from the use of the medicinal tonics, and particularly the mildest of the martial preparations, the phosphate, or citrate or the muriated tincture, or that of the hydriodate of iron.

Experiments lately made by Coster of Paris, if true, very clearly demonstrate the utility of the chalybeates in this application of them. He subjected a number of dogs, rabbits, and other

animals to the influence of those causes most favourable to the generation of tubercles. They were confined in a dark, damp dungeon, without the least exercise, some of which were fed on their ordinary food, and others with bread, containing half an ounce of the carbonate of iron to the pound. The whole of the former became ill, the greater part tuberculous, while none of the latter were thus affected.

The preceding course of prophylaxis is demanded under all circumstances—though especially so when an hereditary tendency prevails. It will also be proper if such is manifested, to advise, at once, a country abode, in a clement and healthy region.

Tubercles, however, having been partially developed, the next concern is to arrest their progress, and in the fulfilment of the design, should the residence of the patient be adverse, the first step usually recommended is a removal to some more favourable climate. Considering however, the numerous inconveniences, privations and difficulties, which must attend an exchange of a distant and perhaps foreign country, let this advice be always preceded by deliberation, in which these circumstances shall have their proper weight, and by such an examination of the case, as shall satisfy us, that the measure holds out a reasonable probability of success. Too often have individuals been wantonly and cruelly separated from relatives and friends, and other domestic comforts and endearments, to a hazardous voyage or journey, dictated without any adequate reason, to languish among strangers for a time, and to perish derelict and forlorn, destitute of those consolations which assuage the agony of the closing scenes of existence, where philosophy affords no balm, and the lenitive of religion may not be applied by a kind or pious hand. Nothing, indeed, is more common than to have persons sent to this city for medical advice in the final stage of the disease, and I speak from experience of the afflictions, in some of these respects, I have actually witnessed. Never did I return from the funeral of those who died under such circumstances, without recalling with some sensibility, the ensuing just and touching reflections of a favourite bard on this dismal scene.

“Thy fate unpitied, and thy rites unpaid!
No friends’ complaint, no kind domestic tear,
Pleased thy pale ghost or grac’d thy mournful bier.

By foreign hands thy dying eyes were clos'd,
 By foreign hands thy decent limbs compos'd,
 By foreign hands thy humble grave adorn'd,
 By strangers honour'd, and by strangers mourn'd."—POPE.

Celsus remarks, "that any air is better than that in which the case is generated;" and, perhaps, under the influence of a similar impression, an extraordinary propensity continues to prevail to urge emigration indiscriminately on phthisical patients, and especially to foreign countries.

"Cælum non animum mutant qui trans mare currunt."*

Not less "*mutatis mutandis*" does this maxim apply to consumption when once developed. It is the climate, and not the disease, which is too often changed by the transmarine excursion.

By a careful study of the symptoms, aided by percussion and auscultation, the state of the lung may be learnt, with tolerable certainty, and if it be slightly affected only, a removal should be urged without delay from an adverse residence, provided winter is approaching, and from which great and decisive benefit is frequently derived. Disorganizations having taken place, what have we to anticipate from this measure, except the mortifying intelligence by some speedy arrival, of the death of our patient, and the just reproaches of his friends, for heedlessly sending him away to die neglected or forsaken, with an aggravation of physical suffering, and moral affliction.

In the selection of a place of *hibernation*, various considerations ought to influence the decision. Benignity of climate will avail little, where domestic comforts are indifferently supplied, and social recreations and other enjoyments, wanting. The mind must be amused, while the body is protected, or gloom and despondency, or fretfulness and discontent, are apt to occur, followed by a train of baneful effects. Nor with the same view, should the position be without frequency of intercourse with home, and what is of very material importance, such as to command sound medical advice, to control the fluctuations of the disease. The former can only reconcile to the estrangement, and occasions may occur in which the latter shall become indis-

* Those that beyond sea go, will sadly find
 They change their climate only—not their mind.—CREECH.

pensable. It may be further added, that though a genial climate exerts some direct power in allaying the activity of tubercular development, it is more signally displayed over the associate affections. Cases I have, at least, remarked, are mainly benefited, where chronic pleurisy or pneumonia, and particularly catarrh or bronchitis, or laryngitis, prominently prevailed.

By the common consent of practitioners, a climate dry, temperate and equable, had been immemorially selected. But of late, this long and universally received opinion is questioned, and the practice growing out of it condemned. There is a traditionary report among us, that it was the custom of Dr. Thomas Bond, a distinguished physician, formerly of this city, to order his consumptive patients into miasmatic districts, with a view of arresting the disease, or a tendency to it, by inducing ague and fever.

What was the result of this extraordinary expedient, I cannot exactly say. The proposition advanced more recently by some of the medical men of England, alleges, that the action of intermittent fever is an incompatible one, and, whenever it can be brought on, or set up, most others, and particularly that of consumption, will be superseded, or relieved. The former, in the language of one of these writers, is "a despot which will bear no brother near the throne."

To illustrate and enforce the doctrine thus assumed, it is in the first place, attempted to be shown, that, throughout the world, in all situations, where ague and fever prevail to any great extent, consumption, and most other complaints vanish, and which is especially true as regards Britain. The facts to this purport, are curious, and may be found embodied in "Young's Treatise on Consumption."

It seems to me, however, that there must be some fallacy in these reports, and at all events, nothing observed by myself or collected by others, gives them any countenance in relation to this country. It is true, I have heard of some localities, more particularly on the margin of a portion of our great western lakes, as much exposed to miasmata, and their ordinary autumnal affections, as they are exempt from phthisis,—and that, a case of it brought to the district, often, and speedily recovers. Even, if far better substantiated, a tale so miraculous were hard to believe, and the more so, since effects are ascribed in direct opposition to those of the same cause, operating everywhere else in the United

States. Nevertheless, it is possible, that consumption might be suspended temporarily, by the prepotency of intermittents, as happens from mania, gout, rheumatism,—the state of pregnancy, and other alike counter agencies. As clear, however, is it to me, that on the subsidence of such predominant influence, it would, as in those instances cited, revert with exasperation. Few diseases more disturb the order of health, by a vitiation of the digestive and assimilative processes, than the very one here proposed as a cure for consumption,—and, it is against this state of cachexy we are so strenuously admonished. It is indeed, asserted by Wilson Philip, that one half of the consumptive cases of Great Britain proceed from hepatic derangements, which, though probably a great exaggeration, still serves to show the influence of this cause,—and, if there so operative, how much more must it become in decidedly miasmatic regions?

Despite the accumulation of evidence, to which I have referred, the generality of practitioners are sceptical on the point, and such a climate as I have mentioned, seems still to be preferred. But where is it to be found? From indubitable testimony it appears, that many of the places we have been in the habit of recommending, are exposed to great austerities of weather, and hence, very liable to the disease. No part of France certainly, is free from it, and it prevails abundantly in Paris, Lyons, and Montpellier—though, the two last cities, especially, have been so much resorted to, by the infirm and valetudinary in this respect. Nor according to the best evidence, is it different with Naples, or Rome, Leghorn, Pisa, Nice, Venice, or truly, of any portion of Italy. Both sides of the Mediterranean indeed, and especially that of the former, combines more of the elements of a baneful climate, in relation to the disease, than any one familiar to us. For a century or two, civilized man has resorted to it, till certain of its fields have become so many Golgothas of his bones. Yet, with all the admonitions of this mortality, a portion of our people still move forward from stupidity or ignorance, fastened by prescription, to offer additional sacrifices on this hideous altar.

As the result of much inquiry, it seems now to be determined, that at or about Valencia, in Spain, is the best climate of Europe for this purpose. But such continues to be the disturbed state of the country, and perhaps, the wretchedness of the accommoda-

tions, that it is little frequented. Madeira is, on the whole, preferred by the British physicians, though not urged very confidently.

Egypt was resorted to by the ancient Greeks and Romans, its climate having then, the highest reputation in the cure of all pectoral affections. But had it undergone no mutation in this respect, of which there seems to be some reason to infer, such are its political and moral degradation, with the consequent social inconveniences, and discomforts, that independently of other considerations, no one would think of resorting to that unhappy country.

As to ourselves, some of the West India Islands, and Bermuda more than any other, was formerly selected. None of these, however, are free from the disease, and Bermuda less than any, owing probably, to the annoyance of damp sea air, from its diminutive size. In winter it is also, on the same account, so peculiarly exposed to tempests, or strong chilly winds, as to sanction the phrase applied to it by Shakspeare, "the still vexed Bermuthes." Nevertheless, one of the larger of these islands, particularly the interior of Cuba, from its proximity to us, may answer, and which I am inclined to believe is excellent in its salutary influences. Yet it is objectionable, from the want of accommodations, and the enormous expense of living. More, perhaps, than any other of the islands, is St. Croix at present frequented. Doubts, however, exist with me as to the propriety of this choice. It is one of the most uniformly and intense hot islands of the Antilles, and while this, in common with the whole group, is prone to the production of phthisis, it, and all other places of a very steady high temperature, exercise the most pernicious influence in hastening the march of the disease to a fatal issue. This fact, long suspected by some, is now perfectly authenticated. The official reports made to the British government, from the military posts in the West Indies prove, that deaths among the troops in most of them, are as great, in some greater, than at home. Natives may comparatively escape. But there is no benignant influence exerted in regard to the generation, or retardation, or the entire arrestation of its progress among foreigners, or new comers. Why, indeed, should it be otherwise, seeing as we have done, the most disastrous period of consumption, that in which wasting of constitutional strength, and the totality of the vital forces, with actual dissolution, most conspicuously

take place, is in the intensities of our summer heat, and of similar climates? Does it not indeed, seem very absurd, after a trial so severe, that at the close of autumn, when some renovation may be anticipated from the fineness of the weather, perhaps, the only chance of preservation, again to plunge the miserable individual into some tropical region, to repeat the same sufferings and hazards, out of which he had just emerged? Not probable surely is it that where our summers do such harm, any other hot region can be productive of good!

From an apprehension of the common delusion on this point, in which the profession are to some extent involved, I dwell the more on it. The fact, however, cannot be too strongly impressed, of the fatal influence of oppressive heat in the consumptive condition. It is active in the generation, the development, and the maturation of tubercles, and should be more sedulously avoided than any other state of weather. As careful am I to send my patients at the commencement of summer heats, to the cool regions of the country, as most practitioners are to tropical climates in anticipation of the austerities of winter.

Many still entertain the opinion, that it is not prudent to confine a patient anywhere within the boundaries of the United States during winter. Do such persons remember that our limits are nearly as wide as those of all Europe, and embrace as great diversities of climate? Taken as a whole, I believe it to be the best in the world, and portions of it I cannot doubt, are as well adapted to the end now in view, as is attainable elsewhere. The contrary estimate of it was originally derived from the prejudices of our early settlers, since strengthened by foreigners, who delight to do us injustice, and confirmed by our own acquiescence. That of Europe, which we are accustomed to commend, is the creation of the poet's fancy. "Distance lends enchantment to the view." There is no part of it in which the winter season is not, in reality, most horrible, and that of Britain and France, scarcely endurable.

But there are some better than other positions in our country. By Dr. Daniel, a very intelligent physician of Savannah, that city has been strongly recommended, and I have heard much in praise of Pensacola and St. Augustine in Florida. No comfortable accommodations are however to be had in the two last cities, and they are also less suited from their proximity to the sea-board.

To a short distance within South Carolina or Georgia, there is the least objection, and I am inclined to believe, from what I have heard, that the town of Athens, in the latter state, offers great advantages. Nearly equidistant from the sea and mountains,—it is well protected against boisterous winds by the surrounding pine forests, and furnishes excellent accommodations. But never having visited it myself, I may have been deceived by partial or false representations, and taking into account all those circumstances previously enumerated, Savannah has hitherto been my choice when called on peremptorily to decide.

That an opposite sentiment is entertained by some writers, and especially the French, as to the influence of positions exposed to sea-air, and such in preference chosen, I am fully aware. The preponderance of authority is otherwise, in which my own experience fully coincides. Between the pure atmosphere of the ocean itself, undoubtedly salutary in these cases, and the state of it produced by an admixture with that of the land, which is no less pernicious, there is a material difference. Every seaman knows the fact, and so sensibly is the impression felt, that the approach to a coast is predicted from it, and most generally he acquires what is called the *land cough*. That the sea-board everywhere is more liable to consumption, than the interior, seems sufficiently demonstrated, and is conspicuously illustrated in relation to our own country.

Convinced, on the whole, that scarcely anything is to be gained by emigration at that stage of the disease when usually persons are willing to undertake it, and having no great confidence in the superiority of any climate over that of this city, not to mention again the sacrifices to be encountered by quitting home, I have ceased to advise it, as regards our own people who consult me. My conviction is, that if with the advantages they may command here, the arm of the fell destroyer cannot be averted, the blow must fall, and then come in those peculiar and grateful emollients of domestic supply, which cannot elsewhere be commanded, to soften and assuage its severities.

Not necessarily adverse to the consumptive, neither favouring its development nor hastening its career, is the coldness of a climate, as proved by the limited prevalence of the disease in the extreme north of Europe. The moderate, when damp, chilly, and variable, has such a tendency in the strongest force, and

hence regions thus characterized, whither it has been so customary to despatch our patients, must, as I think, be far less suited than continuing at home. But there are portions of the United States differently circumstanced in this respect, and from which it were well, at once, to send the consumptive invalid to some one of the last of the places I have indicated.

Determining to winter the patient at home, it will be proper to regulate the temperature of the chamber, to secure which, a thermometer should be used. Warmth, most agreeable to our feelings, is from sixty-two to sixty-five or seventy degrees—and such is the standard adopted. Those who have never experienced the consequences of any wide deviations in this respect, cannot easily conceive, the extent of mischief, of which they are productive. Either extreme is bad. Too much heat creates fever, restlessness and perspiration, and cold, never fails to excite cough, and very often, to renew the inflammatory symptoms.

Notwithstanding, however, these precautions, such is the importance of exercise and fresh air, that the patient should be indulged in both, by riding in a carriage, whenever the weather admits of it,—every care being taken against any injury from the exposure.

No part of the preventive system in consumption has indeed, been more celebrated, or generally accredited, than exercise, especially on horseback. By Sydenham, it is spoken of in terms much more confident than he is accustomed to employ. “Neither mercury in syphilis, nor bark in intermittents,” says he, “is more effectual than riding in consumption, provided the patient takes care to have his linen well aired, and to continue his journey long enough.” Fuller, a very old writer, quaintly remarks, “that a consumptive patient should be like an Arab, always on horseback.” The late Professor Rush tells us, that a riding postman has been relieved more than once, by the pursuit of his occupation.” Exaggerated in the preceding representations, there is still no doubt of the great utility of equitation as a prophylactic.

But this, like every other means, is to be directed with discrimination and judgment. Being stimulating, or at least perturbing, it should never be permitted where the pulse is excited, or an inflammatory diathesis prevails. Employed in this state of the system, it often occasions profuse hæmoptysis, or in other modes, accelerates the career of the disease. From the want of

attention to this precept, I suppose must have proceeded the declaration of Stoll, so contradictory to general authority;—"that whenever a consumptive patient mounts a horse, he commences a journey to the river Styx."

The system, however, having been properly prepared for it, then I believe, regular exercise on horseback, and particularly a long journey, will be found in many instances, to deserve much of the praise it has so long, and lavishly received.

It may not be improper under this head, to allude to the springs of Virginia, as a proper place to send a patient. The country in which they are situated, is perhaps unrivalled in healthiness, and claims many other attractions. These waters, however, exceedingly diversified, have hitherto been so imperfectly examined, that we are unable to pronounce precisely on their properties collectively or individually, and of course to direct them with adequate skill and discrimination. That called the *red sulphur*, is supposed to exercise a sort of specific control over consumption in its early stage, not to be credited of any remedy, and certainly not of this, while its fame rests on popular, not professional, or any other admissible testimony. There are indeed, several medical men, who from actual observations, have assured me, that so far from doing good, the most manifest injury results from the use of the waters, as well as a residence at the springs, owing to the peculiar dampness and obscurity of the situation. They are at the bottom of a deep ravine, formed by very elevated mountains, whose sides are covered by forests, and the sun excluded from the habitations of the sick, nearly half the day. Reports have also reached me, of the efficacy of the *Thermal Baths*, particularly the *Warm Springs*, under like circumstances. Not placing much reliance on them, I can still conceive of certain forms or states of consumption, to which such a bath might be serviceable. Be the title, however, of this noble group of waters, whatever it may be to confidence, in this special application of them, where scarcely anything succeeds, I believe in other respects, they are among the most valuable in the world, and as a *sanctarium* for the summer, eminently adapted. Never, at least, will the valetudinarian regret his pilgrimage thither, when he comes to breathe the pure air, or to contemplate the romantic scenery around him, or to experience the sympathetic tenderness, and cordial attentions of that portion of the refined, and intel-

lectual society of the south, which annually congregates at those places.

Of the preventive efficacy of a sea voyage, who has not heard? That it has proved serviceable in numerous instances, can hardly be disputed by any one, who has examined the weight of testimony in its favour. Yet it is calculated to make a very decided impression, and whether for good or evil, will depend on circumstances, very much connected with the peculiarities of the individual. Debility existing, and especially irritability of stomach, the continued nausea or vomiting to be expected, could hardly fail to induce an injurious, or perhaps a fatal degree of exhaustion, of which, I have known instances. But there being an exemption from these conditions,—its influence is usually salutary, provided the season at which it is undertaken be propitious, and the accommodations such as to afford security against cold. This sometimes so exasperates the case, as to frustrate all our hopes, by the rapid development of tubercles, or by causing a wasteful hæmoptysis. Except in very special cases, the voyage should be undertaken early in June, and only to Europe, to return after the autumnal equinox, and from the facilities and comforts now afforded by the British steamers, or our own regular packet vessels, may be rendered quite a pleasant, and, perhaps, a profitable excursion.

Not much, however, will the preceding course avail, unless the diet be strictly regulated. By the concurrent advice of the best practitioners, it should be light, without having the slightest tendency to heat or excite the system. No course of living seems, on the whole, better suited to these cases, than milk, alone, or mixed with any of the farinaceous matters, and hence, it has been immemorially recommended. To that of the ass, a great preference was formerly, and perhaps continues to be given in Europe. But I suspect it has no superiority, except, in the language of the celebrated Harvey, the discoverer of the circulation, “the patient be an ass.” Milk not agreeing or proving acceptable, the more wholesome vegetables may be substituted, with the freest use of ripe fruits. The annals of medicine of every period, contain instances of entire cures of the disease by living exclusively on the latter, particularly strawberries and grapes,—and though I cannot bear my testimony to such decisive results, I have certainly seen some advantage to accrue. Nothing usually is more eagerly

solicited, and doing no harm, why deny the indulgence of such a gratification?

Dietetic rules, however, so restrictive, are only applicable to cases marked by a phlogistic diathesis. An opposite condition of system often prevails, or a feeble, irritable, attenuated frame, with anorexia or impaired digestion, and a pallid phlegmatic aspect, in which another, and very different course, is to be pursued. It will here be proper to allow animal food, of a light, though nutritious kind, as poultry, every variety of game, oysters, &c. Formerly the use of snails, those nasty slimy things so disgusting in appearance,—taken raw, and in large quantity, commanded much confidence,—and after long discontinuance, has been revived with considerable praise, by M. Sue, of Paris. The fact is noticed merely as an additional instance of the absurdities of these French practitioners. As soon would I propose a diet of toads, or tadpoles, or cockroaches, or other reptiles or vermin, though as an esculent of great delicacy, we have, for the former, the highest classical authority. Especially does it appear from the familiar correspondence of Cicero and the younger Pliny, that they were bred and fattened with the utmost care, so as to attain an enormous size, and among the luxuries promised in the invitations to their social entertainments, are constantly included. “*De gustibus non est disputandum.*”

Besides a substantial course of living, we shall also, perhaps, be compelled to call in the aid of those other means to which we have ordinarily recourse for the purpose of exciting appetite, rectifying the assimilative functions, and renovating strength. Even tonics, as the sulphate of quinine, or the martial preparations may be found necessary. But on the contrary, if in the prosecution of this plan, or under any other circumstances, evidence should arise, by the increased force of the circulation or local uneasiness, or inflammatory action, it is at once to be abandoned,—and in place of it, the loss of blood, counter-irritation, and the lowest diet substituted, till it is completely overcome.

As further means of prevention, in a phlogistic state of system, it may be well to form an issue or seton in the arm to divert irritation from the lungs, and when there is a suppression of any natural or habitual discharge, as the menses, or hæmorrhoids, or repulsion of an eruption, to endeavour its restoration.

Many are the instances I have known of this disease in its

early or inchoative stage, owing to retention or suppression of catamenia, entirely obviated by the appearance of this discharge. It were well also, where the case can be traced to recession of scrofulous tumours from the neck or any other part, to establish some counter-irritation in such position.

Lastly, I have to remark under this head, that women predisposed to the disease should not be permitted to become or continue nurses. That the secretion of milk, and perhaps still more, the act of suction is revellent, may be true. But there is previously an undue afflux of blood to the chest operating very injuriously, and the whole process is attended by an aggravation of pain, and the furtherance of debility and emaciation.

Need it be repeated, that the other exciting causes, and above all taking cold, are to be avoided. The latter may be guarded against, in part by adequate clothing, and especially wearing flannel next to the skin, carefully protecting the feet at the same time. To keep the surface warm, and even in some degree excited, is of the last consequence. The external or dermoid tissue, may be viewed as a diverticulum to the whole of the internal tissues, and when its actions are well maintained, either prevents or invites to itself, and eliminates their morbid irritations. To illustrate this principle, examples are so familiar, as to render unnecessary any minute recital.

Can it be denied that whenever the skin is collapsed, or in other words loses its due vigour, that some inward surface, and particularly the lungs, suffer? It is precisely in this way, that catarrhal, pleuritic, and pneumonic affections are induced, and sometimes greatly relieved by the restoration of cutaneous excitement. Consumption comparatively seldom originates in the mild and equable, or in the extreme northern regions of Europe, and for this reason only, that in the first, the cutaneous surface is necessarily kept excited by the climate, and in the second, by the well heated houses, from furnaces, and flues universally adopted—and on exposure out of doors, by envelopes of fur. The same effect is shown in scrofula. It is not perhaps indigenous to these countries, and carried thither, speedily disappears. Nor is it less true, that among us, breaking out in winter, it will continue for the most part till the return of spring, when very generally it subsides spontaneously. Now, admitting that even a portion of

consumptive cases is of this nature, can a more useful lesson be inculcated, than by a review of these facts?

The system of prophylaxis would be imperfect, were we to omit calling attention to such an adaptation of the pursuits of life, as shall do away or restrain the predisposition to the disease. Too little regard is usually paid to this point, and the consequences of the neglect of it, are often disastrous. My own experience supplies me with not a few instances, where after the constitution seemed to have been rectified, and health confirmed, by a long and faithful adherence to a just discipline, the disease has broken out at the very season of hope—from the effect of some ill-judged employment. Thus may the happy results of the cares of years, be in a moment as it were, materially impaired or irrecoverably lost,—and existence which had been so anxiously cherished, and preserved, become embittered or sacrificed. The evil tendency of certain avocations or trades in this respect was formerly indicated, and of course, all such are to be avoided.

The consumptive, is also the temperament, for the most part, of genius and ambition, and among those, who by birth or fortune, are permitted to indulge their generous aspirations, one of the learned professions is usually selected. But their seductive honours, and glories, and emoluments, are environed by dangers, which ought not to be hazarded. He who hopes to rise to eminence in either, must consecrate his time to study, intense and laborious, equally exhausting to mind and body. Disorder of the digestive and nutritive functions ultimately ensues, and then come the awful admonitions of the approach of the destroyer. But suppose the preparatory period to be passed over more favourably, what has he to expect when fully engaged in the practice of an arduous and anxious calling? The night of the lawyer is partly spent in the arrangement of the business of next day, to be transacted at the expense of the greatest efforts of the pulmonary apparatus, by loud harangues, amidst crowds, and in a distempered atmosphere.

Be he a physician, he encounters in his career, an increase of perils. Compelled to alike toils and privations in his pupilage, he becomes thereafter, subjected to every pernicious agency. Even Sunday brings no holiday to him. Deprived of adequate rest and relaxation, he lives in the abodes of sickness, sometimes where infection hovers, and oftener, surrounded by filth, inhaling

its foulest impregnations. No exposure can he shrink from, and by day and night, alternately feels the burning rays, and chilly dews of summer, the cold of winter, and often the "peltings of the pitiless storm" at all seasons.

"Per varios casus, per tot discrimina rerum
Tendimus."—*Virg.*

"Through various hazards and events, we move."—*Dryden.*

Let him be a divine, though in the exercise of his more quiet and sequestered office, he may comparatively escape these pernicious influences, he will not have an entire exemption. To him also, are assigned some perilous duties, with carking cares. Experience teaches, that the ministers of our religion are very liable to the disease. None of these professions are hence suited to the consumptive.

Commerce holds forth its lures, and might be embraced with more safety, were it not for the confinement and drudgeries of the counting-house, incident especially to the preliminary and subordinate stations. Caution will, therefore, dictate a rejection of these several avocations, and point to a permanent residence in the country, and the culture of the soil, where the purest air may be breathed, the freest exercise commanded, and recreative and even literary pursuits indulged, to the promotion of social refinement, and moral and intellectual improvement.

—"Tacitum sylvas inter reptare salubres,
Curantem quicquid dignum sapiente bonoque est."—*Hor.*

To range in silence through each healthful wood,
And muse what's worthy of the wise and good.—*Francis.*

These suggestions may be thought applicable exclusively to the male sex. Many of them, however, are not less so, to females. More delicate in their organization, and of livelier tendencies to the disease, from other causes, they should practice habitually a greater vigilance in relation to the observances I have enjoined. Their peculiar bane will be found in a stricter conformity to fashion in dress, and to the ordinances generally of gay society, or in its amusements, and dissipations, among which the most conspicuous, are their clothing, compression of the chest from certain preposterous appliances around it, late hours, and

the consequent loss of sleep, crowded and ill ventilated rooms, or theatres, and the subsequent exposures, at night, on their return home. Nocturnal worship at public places operates no less perniciously. Notwithstanding its condemnation by the wise, the prudent, and the pious, it has of late years become among us a sort of fashion, practised to an unusual extent. Congregations are never so thronged as on these occasions, or more variously composed, or attracted by such diverse inducements. It has been said that

“Some go to church, just for a walk,
Some go there to laugh and talk,
Some go there the time to spend,
Some go there to meet a friend,
Some go to learn the parson’s name,
Some go there to wound his fame,
Some go there for speculation,
Some go there for observation,
Some go there to doze and nod,
But few go there to worship God.”

Not concurring in this harsh impeachment of the motives of others, with which I have no concern, I may be permitted to repeat that the enthusiasm in the case has reached a degree of ultraism believed by many, to be productive of several very serious evils, and that I know, from personal observation, the practice growing out of it is eminently calculated to excite, or to exasperate every form of pulmonary affection, though most fatally consumption.

On this disease, I have dwelt with a minuteness, amounting, in the estimation of some perhaps, to prolixity. But on numerous accounts, it has the strongest claims to attention, and I thought it my duty to present all the information which I possess on the subject. Next to fever it opens undoubtedly, the widest outlet of human life. Computations show, that it destroys one-fifth of those who die in Great Britain, making about fifty-five thousand annually;—the mortality is scarcely less in France, Italy, Germany and in many other parts of the world, the United States not excepted.

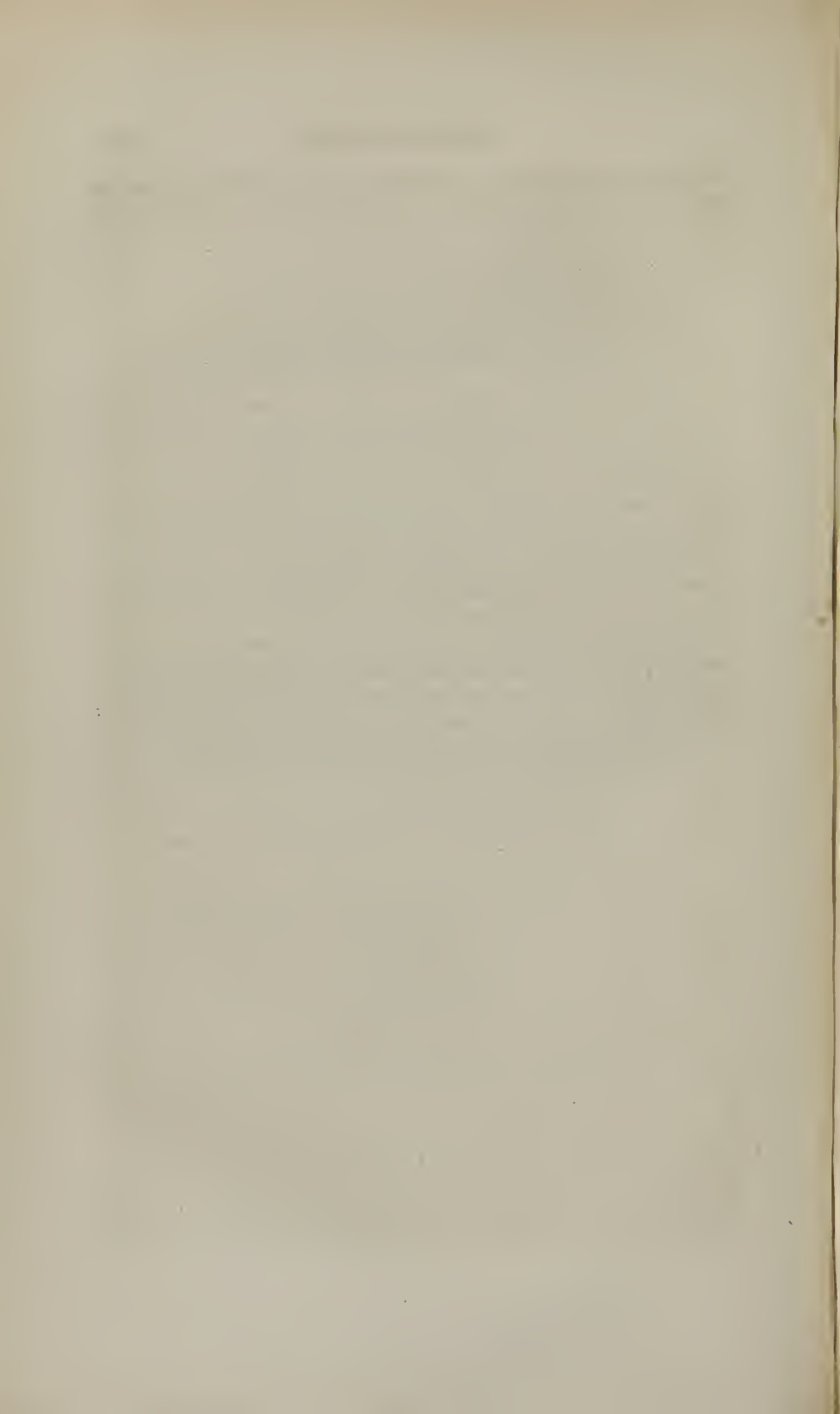
This is an affecting reflection, and while it proclaims the wide spread of the malady, and the little control we have over it, should urge us to further endeavours to detect its nature, and effect its cure. It seems to be the design of Providence, in the economy

of this world, to associate uniformly good with evil—wherever there is a poison, to supply its antidote:

“Terra salutiferas herbas eademque nocentes
Nutrit, et urticæ proxima sæpe rosa est.”—OVID.

“Our bane and physick, the same earth bestows,
And near the noisome nettle, blooms the rose.”

Notwithstanding, hitherto, the slender encouragement to the pursuit, it may be presumed that there is a cure for pulmonary consumption hereafter to be revealed, as a compensation for diligent and persevering exertions in this interesting field of inquiry. To the younger members of the profession I commit it, and from the ample opportunities afforded, I do not despair of its being elucidated by their well directed investigations. He who shall determine correctly the pathology, and indicate with any certainty, the cure of this disease, will wipe away a reproach to our art, and earn a reward as much more glorious than the oaken wreath awarded by the Roman Senate to a soldier on saving an individual in battle, as the preservation of the lives of thousands, is to that of one, or the triumphs of science, compared with the solitary achievements of military intrepidity or prowess.



CYNANCHE LARYNGEA,

OR

LARYNGITIS.

As far as I know the first regular account of this disease is contained in a paper by Sir Mathew Baillie, in the third volume of the Transactions of the Society for the Improvement of Medical and Chirurgical Knowledge, for the year 1812. It has since attracted considerable attention, and not a few cases of it are reported in the periodical journals of Europe, and elsewhere.—The curiosity thus excited, has led to researches into the older writers, and it appears probably to have existed even from the earliest times. It is alleged to have been noticed by Hippocrates, Celsus, Galen, Cœlius, Aurelianus, Lommius, Tulpius, Riverius, Morgagni, Boerhaave, Lieutaud and Mead. But their accounts are slight, vague, and indistinct, and on the whole, the credit of the first accurate description of it, is accorded with sufficient unanimity, to the communication mentioned. It is, however, only justice to state, that a distinguished physician of our own country, the late Dr. Dick, seems to have recognized the disease, at a somewhat earlier date, having in a well written paper on Croup, published in 1808,* clearly referred to it, as the very worst form of that affection, and as confined to the larynx, denominates it cynanche laryngea. The number of cases of it observed since medical attention has been more carefully directed to the disease, would indicate rather a want of pathological precision, than the unfrequency of it, or, that the two affections, having many features in common, it was, up to the period stated

* Barton's Med. and Physical Journal, vol. iii.

generally confounded with croup. Yet it must be deemed a rare disease.

Laryngitis varies as well from the variety of its causes, as the difference of other circumstances under which it occurs. But the common and legitimate form of it usually commences with chilliness or rigors, soon followed by a sense of pricking, or stinging, or dryness, or huskiness of the throat, inducing frequent hawking as it were to get rid of some extraneous cause of irritation. Expectoration is not regularly performed, the sputa being raised up in the manner described. Breathing at the same time is somewhat impeded, and, on a deep inspiration, which is required to inflate the lungs, a painful constriction is felt in the larynx, attended by a sibilous or whistling noise, more or less sonorous, resembling the rushing of the air through a contracted aperture. Yet it is a sound very different from the sharp, thrilling, clangorous intonation of croup, which never occurs, nor does regular cough prevail to any extent, at this or any subsequent period, as far as I have seen,—though the reverse is affirmed. The late Dr. Armstrong, concurring with me on this point, states, that one of the most striking characteristics is an inability to cough, the endeavour to do so, terminating in a sort of grumbling or grunting noise in the throat, which, however, I do not think a happy comparison, it resembling more the spasmodic or convulsive struggles in strangling. The voice is slightly hoarse, and in some instances, though rarely at so early a period, so much affected, as to degenerate into a thick or low whisper. By an effort to cough or spit, and still more, by pressure, the pain in the larynx is much increased, especially at the *pomum Adami*. But on inspection, we usually discover only slight or no inflammation of the fauces, and scarcely any tumefaction of the tonsils, or other soft parts. Yet difficult deglutition in some degree, is apt to be experienced. These symptoms are attended with more or less fever, which however, is seldom high, or the pulse full, or hard and corded, except when it begins in the shape of tonsillitis.

In other instances, the approach of the disease is milder, and more insidious, in the guise of ordinary catarrh, creating no anxiety. Little here is complained of, except a slight soreness of the throat, with scarcely even an erubescence, or mere blush of inflammation, unattended by any very evident constitutional disturbance. This state of things will remain sometimes for several

days, when, very suddenly, a sense of severe spasmodic constriction of the larynx supervenes, and henceforward, the case loses all ambiguity,—developing, in rapid succession, those phenomena already noticed.

Cases too, I have remarked, where the preliminary symptoms seem to be altogether those of gastric irritation. The stomach here, after some previous oppression, becomes suddenly disordered, violent puking ensues, sometimes of bile, with little or no nausea, and, in one instance, of as limpid fluid as in pyrosis, attended by a constant discharge from the mouth, like that in the deepest salivation. During this period, though a slight soreness of throat exists, compared to the sensation of a scald, there is no appreciable laryngeal affection, or respiratory embarrassment in any way. But all at once, as it were, a translation seems to take place from the mucous tissue of the stomach to the larynx, leaving the one organ quiescent, and placing the other in a state of well marked laryngitis. The first to notice this variety of the disease, I believe, was myself, nearly thirty years ago. Long afterwards, it attracted the attention of Andral, who, however, differs from me as to its origin,—though not materially.

As another mode of attack, it remains to be mentioned, that commencing as tonsillitis, phlogosis of the highest degree rapidly extends to the velum pendulum palati, up the posterior nares, the Eustachian tubes, and down into the pharynx, and larynx, implicating in short, all the neighbouring parts.

Contrary to this, with little or no febrile action, in any stage of the case, the whole of this structure, instead of any redness or other evidence of active phlogosis, presents, even at an early period, a pale and bloated aspect, owing to serous effusion into the sub-cellular tissue, giving to this variety of the disease, the title of laryngitis œdematosa. Cases of the kind sometimes arise very obscurely, where the temperament is leuco-phlegmatic, so much so, indeed, that the earliest admonitions of an attack, may be from the distress of a pretty full development of the disease. Two or three winters ago, I was called with Dr. Jackson to a gentleman of this city, of the temperament mentioned, who awoke in the morning, having gone to bed well, in a state clearly denoting laryngitis. Looking into his throat, the uvula, the soft palate, the fauces, were found pale, and enormously œdematous. Exactly a similar instance was I subsequently called to in a lady of

the same temperament. But ordinarily, these œdematous attacks are more gradually unfolded, and distinctly marked, exhibiting too, previously to the effusion, some local and general inflammatory action. Caused by mechanical pressure from tumours near the windpipe, of which I have witnessed several instances, the peculiarities of the disease are not sufficiently interesting to require any description.

Laryngitis, in its progress, whatever may be the manner of its invasion, assumes a graver character, mostly by an aggravation of the symptoms already detailed. The pulse now sinks or becomes diminutive, the skin is cold, collapsed, pallid, or mottled—there is dysphagia amounting sometimes to actual impossibility to swallow, and, in the effort, violent spasmodic strangling, as in hydrophobia, is excited, owing apparently to the fluid entering the larynx, from the epiglottis ceasing to act as a valve, it being swollen and erect.* Dyspnœa is excessive, caused by the obstruction of the glottis, or effusion into the bronchiæ, and pulmonary cellular structure, accompanied by occasional convulsive exacerbations, productive of dreadful agitation. In this paroxysmal state, so extreme is the embarrassment of respiration, that the larynx and trachea, may be seen to move quickly upwards and downwards in the neck, and all the muscles, subservient to this function, are thrown into an irregular action, so that the chest heaves violently, accompanied by a general distortion of features.† The eyes are wild and protruded—the mouth open, gasping for breath—the lips pale or livid—and such, too, is occasionally the face, covered with cold, pearly drops of sweat—the tongue is thrust out, and swelled, and the voice scarcely audible. Concomitantly there is every expression of extreme agitation and distress. In bed, the patient can be kept not for a moment in any one position. Tossing himself from side to side, alternately rising up and falling down, he sometimes springs on his feet, and walks or rather staggers about the room, in the agony of impending suffocation, which, indeed, is sometimes so intolerable, that we are told by Bayle, attempts at suicide have been known. These convulsive attacks being over, considerable mitigation of suffering, and disposition to sleep ensue, which respites, however, are not of any long continuance, and finally, death takes place in a

* Percival's case; vide *Med. Chirurg. Transactions*, vol. 4, p. 298.

† Porter, on the Disease of the Windpipe.

return of an exacerbation, from suffocation, often with the full retention of the intellectual faculties.

The duration of the disease averages from two to five days, though some cases of it have terminated in a few hours.

The preceding sketch of laryngitis has been drawn in the strongest colours, particularly as regards the advanced stages. Its attacks are occasionally milder, and, indeed, there is to be found, in its several presentations, every gradation of violence, and variety of modification, from mere hoarseness or impairment of voice, to the tremendous intensity of affection I have described.

It is a common opinion that laryngitis prevails more frequently among males than females, and in adult, and even advanced, than early life. Certain it is, of the cases recorded, much the larger proportion were males, and far beyond the meridian of existence. That of the illustrious Washington was one of these, who died in his sixty-eighth year, and the very first instances to which Baillie was called, occurred in two eminent practitioners* nearly as old. Few, or none, perhaps, which I have met with, were not of this description, and no very high authority has related any in individuals who were not far beyond their majority.

It has indeed been questioned, whether this disease at all belongs to very early life. Taking an intumescence of the lining of the larynx, without any adventitious membrane, to constitute the distinction between it and croup, there can be no doubt of its occasional occurrence. In one family only of this city four children died of such an affection, the whole of whom were between the third and fifth years of age, each of which attacks commenced as ordinary sore throat. But a stickler for nosological precision might object, that here there was inflammation alone of the mucous membrane, which we shall presently see does not comprehend the totality of laryngitis, this being more an affection of the subcellular tissue, though the mucous membrane is also usually involved in the phlogosis. These cases, therefore, would be held to be croup, in the stage prior to the extravasation of lymph. From the mode in which they originated, it seems however not impossible that the cellular tissue was implicated, as it always is in sore throat when of a phleg-

* Dr. Macnamara Hayes, and Dr. David Pitcairn.

monous character. The controversy on this point must be regarded as one pretty much of definition.

Notwithstanding the disease may be more incident to males, conspicuous examples of it are not wanting in females, among the most so of which is that of Josephine, the late empress of France, whose chequered and eventful life was thus closed in her forty-eighth year. My own practice has supplied me with several instances of it in females of middle age, and it may be remarked as a very curious circumstance, that while in the males all the attacks I have seen were once only, they have been very frequently repeated in the females. These women indeed, are so predisposed to the disease, that they scarcely ever escape it, in some degree, when subjected to its exciting causes.

Like its allied affections, an exposure to cold, and especially to a sour, austere atmosphere, or becoming wet from rain or other ways, is the usual, and perhaps, only cause of genuine laryngitis—and to which, we have reason to believe, an increased susceptibility is created by repetitions of tonsillitis. This fact is noticed in the reports of many of the cases. But other causes have been assigned, of at least a variety of the disease, as whatever, in short directly or indirectly inflames the larynx. The inhalation of the vapour of boiling water is alleged to have induced it in those who have suffered in this way from the bursting of the boilers of steamboats, as well as in the instances of five children on one occasion, and on another of one, who through mistake, applied their mouths to the spout of a tea-kettle of hot water. The inflammation here, we are told, was exceedingly intense in the upper portion of the windpipe, attended by the prominent symptoms of laryngitis.* Examples, too, are to be met with as previously mentioned of its being traced to the extension of phlogosis of the neighbouring parts from common sore throat, and I may now also add, from erysipelas, rubeola, scarlatina, variola,—and also from mercury, and the pressure of adjacent tumours, &c.

An account is moreover given, of its having prevailed to a wide extent, spreading simultaneously over a large district of country. But I am satisfied, from information on which I can rely, that the epidemic was a species of scarlatina anginosa, and rather in the shape of croup.

* These cases are reported by Dr. Marshall Hall in the 12th vol. *Med. Chirurg. Trans.* London, and by Dr. Burgess in 3d vol. *Dublin Hosp. Reports.*

More to be considered as real laryngitis than any of these instances, is the affection which I have noticed of the larynx, suddenly induced by a reflection, as it would seem, of an irritation from the stomach. By Andral, however, this variety of the disease seems to be considered as arising sympathetically from an acute gastro-enteritis, which I think does not accord with the phenomena of the case itself, or some very striking analogies. Especially am I inclined to my own view from having uniformly observed, that on the laryngitis taking place, the alimentary tube lost its irritability, and became even torpid or very insensible.

Laryngitis may be distinguished from croup by the partially, or as may sometimes happen, diffusively inflamed fauces, by tenderness of the larynx, by difficulty of deglutition, by the absence nearly of cough and peculiar rhonchal intonation, and perhaps, by the period of life at which they occur, the one being mostly incident to advanced age, and the other to childhood.

These circumstances, or some of them, at least equally serve to discriminate it from pharyngitis, to which, however, I shall add, that while in the latter, the attempt to swallow is agonizing, the respiratory function remains undisturbed. As to the modifications of the disease itself, diversified as these are chiefly from the difference in the manner of production, I presume there can be no perplexity in the recognition of each one, where any care is practised in the investigation of the respective cases.

Laryngitis is a very unmanageable disease, sometimes resisting entirely our best efforts. Baillie pronounced it nearly incurable by medicine, and Cheyne, and other high authorities, consider it as the most fatal of the phlegmasiæ. Bayle, a Parisian physician of great eminence, confesses that he lost sixteen out of seventeen, which he attended. By Ryland, a later writer, who has collected twenty-eight cases, treated by different practitioners, ten only recovered, which is deemed far more than the average success.

Called early, however, in the case, and pursuing a vigorous practice, it is cured, though with extreme difficulty, and still seldom, or, perhaps, never, in the advanced stages, by medicine, where from neglect or inappropriate treatment, derangements about the glottis, or in the lungs, have been permitted to take place. The symptoms denoting favourably, or otherwise, are sufficiently obvious without any further detail, from the history

which I have given of the disease. I shall therefore only add, that, according to my own observations, the *œdematous* is by far the most fatal form of it.

The appearances on dissection are varied. It has sometimes happened where death was sudden, probably from spasm only, no lesions were observable. But under other and more common circumstances, the lining of the larynx is met with turgid and red, the phlogosis diffused, or punctated, with the intervening spaces little or not at all changed. From tumidity, the sides of the rima glottidis often so approach, that the aperture is greatly diminished, or nearly closed, and the epiglottis, as I have said, is sometimes swollen and erected, leaving the glottis open or uncovered. Extravasations of lymph to any extent on the surface of the membrane seldom take place,—though instances are mentioned of a collection of mucus—still more rarely of pus, and occasionally, of a slight fibrinous pellicle, spread over it. The proper adventitious membrane of croup never exists.

Cutting through the mucous membrane, a copious serous, or lymph, or purulent effusion into the subcellular tissue is sometimes met with. Nor are these fluids uniformly confined to this immediate position. The inflammation may be more pervading, and so intense, that even abscesses are formed in remoter parts of the cellular tissue, of which Armstrong gives an example, of one between the muscles of the pharynx, and the bodies of the cervical vertebræ. These are the appearances in or about the larynx.

The trachea is seldom involved, and certainly not to any great degree. “No examples, indeed,” says Porter, a writer of distinction, “are on record of the inflammation having descended beyond the larynx,” which is, however, not exactly the fact. Leveille relates a case where it was manifested throughout the windpipe to its extremest ramifications.* The bronchiæ are occasionally choked up by an excess of glairy or more viscid secretions, and the lungs loaded with dark blood, or inflamed in their substance or pleural coverings. It is hardly necessary to advert to the appearances in the throat when the case proceeds from an extension of the phlogosis of that part, they being such as belong to common or other states of tonsillitis, and its complications.

* Gazette de Santé, 1827.

But in place of the preceding appearances of inflammation, we occasionally meet with the reverse, or those of œdema, in the subcellular tissues of the fauces and windpipe, and there may be also an infiltration of that of the pulmonary structure, with pallor of the mucous coats of the respiratory tube, throughout its whole extent.

Embarrassment as to the pathology of laryngitis is still confessed by many, though really I cannot perceive any peculiar obscurity about it. Enough, at all events, is ascertained, to assure us of its seat being mainly in the upper portion of the windpipe;—and that, the action usually partakes of a mixture of spasm, and inflammation is no less apparent. But, in this respect, there is a striking similitude to croup, in the early stage, the most remedial of diseases:—whereas, laryngitis proves directly the reverse! To solve this problem satisfactorily, has perplexed some of the ablest writers. Towards an explanation of it, I will suggest, that much of the peculiarity of the latter affection as well in relation to the symptoms, as the difficulty of cure, proceeds from the position and nature of the phlogosis. That of croup, restricted more especially to the mucous tissue, is adhesive, eventuating usually in the exudation of coagulable lymph on its surface. Expending its force on the contrary in laryngitis, chiefly on the subcellular membrane, it is of another character, productive of tumefaction, ending sometimes very speedily, and often when protracted, in effusion of serum, or lymph, or the secretion of pus, the first being the most common event. Laryngitis, in a word, is an affection, having an identity with the inflammation of common sore throat, in every leading feature, and is more serious only, from its location in a more vital structure. It is very intelligible how either of its ultimate states mentioned, influences the case. By swelling from phlogosis alone, the larynx may be obstructed—and to this condition, the peculiar phenomena of the affection are mostly referable. But it is occasionally otherwise. The cellular, which lies under the mucous membrane, becoming distended by an effusion, pressure is made on the rima glottidis, approximating its sides, thus occasioning a similar mechanical interception to the passage of air to the lungs.

Contemplating the difference of condition in the two diseases, ought we to be surprised at the greater intractability of laryngitis? An inflammation of the cellular membrane, it is well

known, is never easy of resolution, proceeding most frequently to some other termination, in spite of our endeavours to arrest it, and in relation to the intumescence from extravasated fluids, we must be equally aware, that the customary remedies in croup cannot succeed. This is one of the many instances in which the doctrine of tissues, beautifully illustrates the obscurest points of pathology, guiding at the same time to a more correct and enlightened practice.

From the moment that my attention was directed to the subject, in consequence of the great interest it excited at the time, I adopted these pathological views, and have ever since steadily maintained them. Three or four years ago, they were published in one of our journals, and I find that they have been pretty generally adopted in Europe, without however being acknowledged in a single instance.

There is only another consideration to which I deem it necessary to allude. We have seen, that croup and this disease, though occupying nearly the same position, occur mostly at different periods of life, and that the adventitious membrane is peculiar to the former affection. An explication of this difference may, perhaps, be attained on physiological principles. During the growth of the body much fibrin is required in the formation and increase of organs, and accordingly it abounds in the blood. But on the completion of this process, it diminishes, and in advanced age bears a less proportion to the serum, which now exists in similar excess.

In entering on the treatment of the disease, it should be premised that I shall have chiefly in view the common inflammatory form of it as that which is only legitimate.

To overcome the phlogosis I have described, so as to prevent suffocation from the closing of the glottis by it or the œdematous state subsequently induced, is here the great object.

The chief remedy in the beginning consists in copious venesection, urged sometimes even *ad deliquium animi*. Less extensively used, it is altogether inadequate to an extreme emergency. Entirely persuaded am I, that much of the want of success complained of, in this disease, is to be ascribed to the insufficient bleedings usually practised in it. Most of the European physicians commend the practice, and pursue it, though it appears from the history of the cases reported, with few excep-

tions, not with intrepidity, and scarcely ever to the extent I have suggested. Conceding the decided efficacy of such a large loss of blood in croup, about which there can be no longer any controversy, it surely is equally or more demanded in laryngitis, and what might thus be presumed has been verified on trial. The only cases of the disease I have ever cured or seen cured, were mainly by this energetic course. Nor in reference to the ends in view, is scarcely any delay admissible in the application of it. Even in a few hours, effusion may take place, and then it will be nugatory, and, perhaps detrimental, by exhausting the vital forces, without making any impression on the lesion itself. The language of Macbeth, on another occasion, conveys to us here a useful lesson:

“If it were done, when ’tis done, then ’twere well
It were done *quickly*.”

It was probably on this account, the smallness of the bleeding, that Baillie was led to question its efficacy, in which estimate several of the very respectable foreign writers seem to coincide. Washington’s death, humanly speaking, may be ascribed to his having been so sparingly bled in the very commencement of the attack. The subsequent and larger bleedings were too late, effusion having taken place. He was a very robust man, of a sanguineous temperament, in whom such an inflammatory attack required the freest depletion.

Laryngitis, it is alleged, often occurs in aged persons, and sometimes, with shattered constitutions, who cannot bear this practice. But what is there, that can be substituted with any hope of success? Even if some risk may be incurred, which I do not think can be under any circumstances, from a single bleeding, however large, it is surely better to venture it than to permit the patient to perish unaided, from any dread of responsibility. An enormous loss of blood, however, is not always exacted, the disease ordinarily yielding to a more moderate quantity.

As soon as the operation is over, an endeavour is to be made to excite vomiting by a combination of tartarized antimony, ipecacuanha, and calomel, the action of which may be promoted by the warm bath. The late Dr. Armstrong has given some very strong evidence to the utility of the emetic practice, which, indeed,

he seems to have preferred to every measure. Disappointed in the results of blood-letting, general and local, he was induced to try active vomiting in several cases, which subsequently came under his care. "No circumstance in my life," says he, "ever gratified me more, than the great and sudden relief which vomiting afforded: in reality, it removed all the urgent symptoms at the time, and being repeated as soon as the slightest signs of stricture in the larynx returned, at last completed the recovery."

As well from actual experience in this application of them, as the analogy of their decided efficacy in croup, and still more in the phlegmasia of the throat, which I have said bears the closest affinity to laryngitis, I am disposed to appreciate highly emetics in this case. But though undoubtedly beneficial, there is some extravagance in the commendation of them I have quoted, and to direct them to the exclusion of venesection, or in any other view than in subordination to it, I am sure must be unwarrantable. Emetics however are totally condemned by some of the recent writers, from an apprehension mainly that in vomiting a portion of the contents of the stomach might enter into the windpipe, the glottis being uncovered, owing to the erection of the epiglottis as represented sometimes there to happen, causing all the agony and danger of strangling, which seems to me to be the most idle of objections. Not often does this state of things exist, and never perhaps, at the early stage, when emetics are proper, and were it, I should presume such a catastrophe could scarcely take place from vomiting, which is an expulsive effort.

The disease not submitting, we are next to resort to leeches to the throat,—then to emollient poultices, and finally to a blister, with inhalations of the mildest vapours.

Evacuations by calomel, I have found useful.

As the disease is characterized by recurrences of violent paroxysms of spasm, the antispasmodics, musk, castor, assafœtida, the oil of valerian, camphor, &c., have been suggested, which possibly might be serviceable on the proper reduction of action,—though the practice strikes me as equivocal, and hence I have never directed it, always preferring the opiates, to any of these articles.

Nothing, however, within my experience, and I have tried diverse means, so completely controls these periodical exasperations as a cataplasm of tobacco around the neck, or smoking the

article, where the individual is not habituated to its use. The success indeed, of the few experiments I have made with it, leads me to believe, that it may prove a very important therapeutic agent in the more general management of the disease. It occasions very severe and protracted nausea, followed by thorough relaxations, and probably abatement of phlogistic action. Nausea, when long endured, has, indeed, a very decisive control over all such conditions, and particularly when there is a combination of spasm with inflammation. Examples are very numerous and striking to this effect. Colic is one of those instances, and I have seen paronychia, even furunculus, seated in the cellular texture, itself, mitigated or cured by it.

The period having arrived when the directly depleting measures can be carried no further, I resort to sweating, by the Dover's powder, freely given, and the vapour bath. This process ought to be continued for several hours unremittingly, and thus conducted, I may say, from the experience of several years, deserves much attention. Baffled sometimes in my efforts to relieve the advanced stage of croup, I originally resorted to it in that affection, and encouraged by the occasional results, was led by analogy to extend the practice to this disease, where it has proved more uniformly effectual as I expected, from the difference of the pathological condition in the two cases, the existence usually of the false membrane in the one, constituting a peculiar and insuperable obstacle to success. It is here also, that the process of steaming, by immersion of the arms in warm water and covering the head, is far more feasible in the execution, holding out a surer promise of advantage, than in the croup of children, in which it has been recommended.

This is, perhaps, the best that can be effected in this stage of the disease, and when further advanced, our resources become exceedingly limited, and will be found, I apprehend, so precarious, as to deserve, for the most part, little confidence. It is proper, at such a conjuncture, to endeavour, as prelude to any course of treatment, to determine the exact state of things,—whether it be owing to swelling from inflammation in the larynx, or to œdema of its cellular tissue, or to congestion or other morbid states of the lungs. These are considerations that can alone guide us to correct and definite practice, and which may be determined by a comparison of symptoms, and still more precisely by the external

means of exploration. But of the conditions predicated, the first, or that regarding the larynx itself, can now only claim to be noticed.

Entertaining an impression of a still enduring inflammation, either in the mucous or subcellular tissue of the larynx, a repetition of local bleeding, to be succeeded by further counter-irritations, promises most. Expectorants, so serviceable in somewhat similar affections, are here of no advantage, except, perhaps, the antimonial preparations, so given, as to operate merely on an antiphlogistic principle.

My chief reliance would be placed on a combination of calomel, opium, and ipecacuanha, not so much from any actual knowledge of its utility, in this particular application of it, as its confessed efficacy in the cure of reduced states of inflammation generally. But there are some of the recent authorities, who at this, or even an earlier period, urge most strenuously the freest use of mercury internally as well as by inunctions, so as to create its specific impression as speedily as possible. What would be the result of such a course, whether for good or evil, must depend on circumstances. Moderately induced, salivation might be beneficial, whereas, inordinately bursting forth, which is to be apprehended from such copious introduction of mercury, the consequences could hardly fail to prove disastrous. Let it be recollected, that this very condition is enumerated among the causes of the disease.

An allusion has been made to a variety of laryngitis where even in the commencement, in place of activity of inflammation an œdematous disposition is manifested in the throat extending down into the larynx. Cases of this sort, I have said, are peculiar to the lymphatic temperament, and should be managed very differently from the ordinary disease.

Excepting by leeches, and these only in the earliest stage, and sparingly, the loss of blood is not admissible. Emetics here are particularly serviceable,—a blister to the neck scarcely less so, and I have derived advantage from touching the whole of the fauces with a strong solution of lunar caustic, and still more with the powder of burnt alum. These applications, especially the latter, produce a powerful impression, reaching even to the larynx,—subversive of the pre-existing state of the parts, and thus ar-

resting the disease. They are in every view, preferable to the stimulating gargles which have been usually employed.

Effusion having taken place, and life menaced, it seems to me that by cutting down into the cellular membrane, or perhaps, by simple puncture, the fluid might be made to escape, and relief consequently afforded. But this suggestion, so far as I know, has never been carried into execution, at which I am not a little surprised, as I really do not perceive any objection to such an operation. It affords me however gratification to find that it has lately received the sanction of Lisfranc.

As a dernier alternative in either case, laryngotomy was early proposed. Baillie strongly advised it, the opinions of whom are always to be respected. To be useful, however, it must be properly timed. Too early performed, it can hardly fail while active inflammation prevails to become an aggravating cause, and too long delayed, or till structural changes take place in the larynx itself, or the lungs are seriously implicated, or the sinking condition supervenes, it proves altogether nugatory.

It will be right, prior to attempting the operation, to endeavour to ascertain the state of the parts with a view to the determination of its propriety, and this so far as regards the lungs, may be done by the means just indicated.

By opening the windpipe in due season, respiration would proceed in spite of the obstruction of the glottis, the irritated structures restored to quiescence, or at least, relieved from the existing violent agitation, so exasperating in its effects, and which by continuance, must produce pulmonary implication, or effusion into the cellular tissue of the larynx itself. From the wound the danger is in no respect enhanced. The aperture is to be allowed to remain open until the inflammation subsides, and the natural passage re-established by the subsidence of the tumefaction, or the removal of other impediments.

As practised ordinarily, the operation is very defective. The opening without a canula closes, and, therefore is abortive. To introduce, as well as to retain that instrument is difficult from the spasmodic movements it excites, and as an extraneous body, it must be very mischievous in the highly irritable state of the parts. It does indeed appear, that in several instances, where there was the fairest chance of the operation succeeding, it proved otherwise,

—suffocation taking place from the immense accumulations of mucus, owing in all likelihood to the irritation thus induced.

Convinced of the force of these objections, the late Professor Physick early abandoned the use of the canula, and kept open the aperture by means of a very ingenious contrivance. Carmichael,* an eminent surgeon of Dublin, also operates in a new mode, and with entire success, in the only case in which he has had an opportunity of trying it. To the works on surgery I refer for an account of these and other improved operations.

Laryngotomy has been three times performed in this city by Dr. Physick, once in croup, and twice in laryngitis. But on each occasion in the very last stage of the disease, and consequently without success. No relief was afforded in two of the cases owing to lesions of the lungs, and death speedily ensued. But in the third, laryngitis, there was such a complete suspension of all the distressing symptoms for several hours, as to afford hope of recovery, though a sudden return of spasm terminated it otherwise.

The operation has also been performed by Dr. Rhea Barton in a case of croup, which I attended in consultation with Dr. Jackson, and here likewise, it proved unavailing. The child, however, was *in extremis*, and a tubular membrane existed, reaching from the top of the larynx to the ramifications of the bronchiæ. Great portions of it being detached and brought away by the forceps, an inexpressible degree of relief was afforded, for a considerable length of time, and the child would probably have done well, had it not been for an exorbitant secretion of mucus, by which it was ultimately stifled.

Notwithstanding these failures, I cannot forbear to urge the importance of this resource of our art. Contemplating the two diseases, we shall be led to the conclusion that it promises much more in this than in cynanche trachealis. The former is comparatively seldom extended to the lungs—is exempt from the lymphic extravasations, or membranous formations in the larynx, and hence the operation is infinitely less liable to miscarriage. Nor is it so difficult or dangerous in the latter disease. Croup occurring in children, the calibre of whose windpipe is very small, and the mucous lining exceedingly vascular, with the cries and

* Transactions Dub. C. M. vol. iv. p. 311.

struggles of the child, are considerations very adverse to the success of it in that affection. What thus appears *a priori*, experience confirms. The operation has been resorted to, in probably about an equal number of instances of the two diseases, though with much better effect in laryngitis. Twenty-eight well authenticated cases of success have I collected, of which nineteen were in the latter, and eleven in the former affection. No reference now have I to a recent report by the Parisian practitioners of their great success, which I think comes to us in too questionable a shape to be trusted. But I repeat that the operation is not too long to be postponed. Convinced as I am, by the most melancholy results of the too frequent intractability of this affection in an advanced stage, to any course of medicinal treatment, I would not hesitate, seeing its unrelenting progress, to recur at once to the operation as the surest means of preserving life. Delayed till an emergency shall arise, which may seem to warrant, as a final resource, this proceeding, in the estimation of friends and attendants, we lose the golden season, and must be prepared to encounter the odium of an unfortunate attempt with the uncomfortable reflection of what we had sacrificed by irresolution to prejudices, which ought never to be consulted, against the suggestions of judgment, or the dictates of duty.

CHRONIC LARYNGITIS.

It may be proper to premise, in entering on the consideration of the chronic lesions of the windpipe, that they do not uniformly bear a very exact resemblance to either croup or the acute affection of which I have just treated.

Cases are presented, approaching more nearly to the one or the other, and sometimes we meet with varieties differing from both. The term laryngitis, therefore, I adopt on this occasion, in conformity with the conventional understanding of it, to express a series of chronic degenerations of the respiratory tube, and not in its limited or strict sense.

By those who are studious of nosological nicety, a division has been made between the lesions of the larynx and the trachea, and each erected into a separate disease. That these portions of the windpipe may independently suffer, is sufficiently probable,

though the larynx more commonly, and its affection being of greater danger, has the stronger claims to attention. The distinction, however, is not important, having very slender practical bearing, and hence will not be rigidly observed by me.

Of these lesions, the simplest and least formidable, is that familiarly termed hoarseness, where the voice is rough and raucal, or low and feeble, rarely attended with constitutional disturbance, —the only serious inconvenience experienced, being an impaired phonation. The duration of such a state may be from a few weeks, or months, to years, or even endure throughout a long life, without any sensible mitigation or aggravation, in proof of which, I have an acquaintance, who for forty years or more, has not been able to raise his voice above a whisper, and continues to enjoy robust health. Cases, however, of this sort do occur, which after an indefinite period, are excited into some activity, and become progressively developed.

Chronic laryngitis proper, usually approaches with huskiness of the fauces, and slight difficulty of swallowing, considered at first, as merely a trivial soreness of throat. But sooner or later, to an increase of these affections are added a short, dry, worrying cough, hoarseness, pain and embarrassment in speaking, the voice when attempted to be elevated, giving way, followed by shortness of breath, and considerable fatigue, or even temporary exhaustion.

The voice too, independently of such exertions, may be affected. It is usually more hoarse when the stomach is empty, and is sensibly improved by eating. Nor is the deterioration of it less, by an exposure to a temperature materially different from that to which the individual is habituated, and it is not a little curious, that the effect is sometimes more immediate and greater, by a transition from a cold to a heated apartment, than the reverse.

Now also, uneasiness in the larynx is complained of, rather of stiffness than tenderness, which is speedily converted into a sense of prickling, or stinging, attended by a constant propensity to gulp, and other efforts, as it were, to get rid of something irritating about the fauces or glottis, productive occasionally of paroxysms of spasmodic or convulsive cough, with a peculiar wheeze in making a deep inspiration. On pressure of the larynx, pain is betrayed, though not uniformly, and, indeed, instances have been

met with in which several of the preceding symptoms were wanting, or very faintly expressed, and especially those most prominently characteristic of an affection of the windpipe.

The lesion here for a considerable period, seems to be confined chiefly to the throat, or at least the complaints are referred to it, and under such circumstances, there is mostly derangement in the digestive functions, denoted particularly by the sense of gastric oppression, acrid, sour, scalding eructations, constipation, or vitiated alvine discharges, the tongue coated in the centre, and florid at the tip and edges, and with a cough, rather of a nervous or stomachic, than pulmonary character. Examining the throat at this time, different appearances are exhibited; sometimes the vessels are injected and turgid only, and on other occasions, the surface is rough, granulated by the prominency of the cryptæ, or mucous follicles, or perhaps it is delicately inflamed, with an aphthous ulceration, or more intensely so, the whole of the soft parts being even tumid or the tonsils are merely hypertrophied, or there is an elongation of the uvula, either thickened and bloated, or attenuated and relaxed.

No further affection of the system seems to exist at this early period, than some irritation of the pulse, and softness and flaccidity of the integuments, with diminution of muscular power, and still oftener, of mental energy. The disease, however, henceforward becomes rapidly evolved, by an exasperation of some of the preceding, and the disclosure of new and less equivocal symptoms, till it reaches its maturity. Embarrassment of breathing now prevails, characterized by a long inspiration, effected by violent muscular exertion, the expiration being comparatively shorter, and less laborious. During the inspiratory efforts, there is a shrill sound from constriction of the glottis,—the voice is very rough and hoarse, or lost in a low indistinct whisper. Dyspnoea of a spasmodic nature periodically returns, and which is sometimes of extreme violence. Cough and incessant wheezing with an impeded expectoration, are nearly constant attendants—the sputa of ropy or thin mucus, sometimes mixed with small sebaceous masses, or puruloid or purulent matter, are brought up by hawking, and in these irritating exertions, a spasm of the windpipe is excited. Deglutition too, in some instances becomes more severely affected, and such is the group of features by which the disease among our divines is usually characterized,

with whom it is so common, that it has received the popular designation of Clergymen's cough or sore throat.

The case, however, as often lingers along, imitating the career of genuine consumption, of which, indeed, it constitutes a variety, having the title of *phthisis laryngitis*. It is under these circumstances, that pain, heavy and obtuse or more acute, is complained of in the chest, the primary irritation involving the lungs, succeeded ultimately, by the usual evidence of hectic fever, frequent pulse, hot skin, flushed cheeks, dry and florid tongue, occasionally, purulent expectoration, nocturnal sweats, colliquative diarrhœa, and extreme emaciation. Towards the close, there is much aggravation of the difficult respiration, and occasionally, such vehement fits of coughing as to induce strangulation, sometimes fatal, though more frequently terminating by the disengagement of tenaceous mucus, or of pieces of coagulable lymph, or carneous like substances, coloured by blood, or mixed with pus.

Dysphagia may now also exist, and to such a degree that I have seen every description of fluids in the effort of swallowing, returned through the nose, and even solids productive of scarcely less distress.

The duration of the disease varies from a few weeks to several years.

Chronic laryngitis is chiefly confined to middle life. Nearly the whole of the cases reported, were in persons between twenty and fifty, and much the larger proportion of them from thirty to forty-five years of age. No instance in childhood, or in old people, have I met with.

The disease is more incident to the male than female sex, according to the statistics of Belloc and Trousseau, writers of the highest authority on the subject. Ryland, however, asserts the contrary, while Frank, of Vienna, tells us, that women are entirely exempt from it, which is contradicted by others, with whom I concur, having seen several cases of it in females, though I suspect it is, comparatively, a rare event. My attention now is to the strictly local form of the affection. As a part of general disease, and especially of pulmonary consumption, it is, perhaps, oftener seen in women than men.

It has become a very common notion of late in this country, that of all denominations of persons, clergymen are most prone to laryngitis, and much exegetical speculation indulged in regard

to the fact. That it is of very frequent occurrence among them, as are also the other lesions of every part of the pulmonary apparatus, is unquestionable. Nothing, however, do I know in their habits or occupations, to dispose them more to such attacks than various other classes of people, and especially the members of the professions of the law and medicine. The pleadings of the bar, are certainly as often, as loud, and as long, as the preachings of the pulpit, and the air of a crowded court-house not less impure than that of a thronged church, or conventicle. Medical practitioners are subjected to a tenfold exposure to the most operative of the causes of this and similar diseases—to an equal intensity of study—to the cares and responsibilities of an arduous calling—to interruptions of rest—to the inclemencies of weather by day and night—dry and wet, hot and cold, the fætor of hospitals, and dissecting rooms,—and some of us lecturers, I am sure, are not sparing of our lungs or windpipes. Be this, however, as it may, of such a tendency in the exercise of the vocal organs of speaking or singing, when regulated with moderation, and particularly in the practice of the sacred profession, I must express my doubts. But the affection existing, it is very intelligible how such exertions may exasperate it, and in this view only, am I inclined to believe they prove baneful. The use of any organ is preventive of morbid aggression by the corroboration imparted, and acquires susceptibility to it in the ratio of its indolence or inactivity. It being disordered, however, employment serves to promote the injury, and to weaken the capacity of resistance to its extension or aggravation.

Nevertheless, I do not wish to be understood as denying that inordinate efforts of the kind, in vehemence or duration, may not conduce to the disease, and particularly, where there is any proclivity to it.

Not long ago, I attended in consultation, a member of the bar from the country, in the prime of life, of the largest frame, and most vigorous constitution, for this affection, with complete loss of voice, who ascribed it altogether to the habit of speaking in the loudest tones before a judge as deaf as a post.

My remarks have had reference to the genuine, primary lesion of the larynx. Clergymen, though exceedingly susceptible to it, are more peculiarly so, to the modification of the disease I have noticed as deriving its title from them, which is a secondary

affection, first displayed in the faucial structure and subsequently continued to the windpipe. Their sedentary and other habits, I have no doubt conduce largely to this variety of the disease.

The predisposition to chronic laryngitis, or at least, to the most prominent and intractable species of it, seems to be laid in the lymphatic temperament, coupled with a false nutrition—that precise condition which leads to the production of tubercular phthisis, and the strumous degenerations,—though it may originate in any bad habit of body, particularly in irritated and heated states of the stomach, or depravations of any of the chylopoietic viscera.

Except in a solitary instance, that of a clergyman of this city, I do not recollect having seen it to result from an acute attack, which, however, is inconclusive against its oftener happening, as affirmed by writers whose reports are entitled to credit. Yet I think, it may be mainly assigned to very much the same exciting causes as the recent affection, operating more slowly, and with less intensity on a feebler, or decayed, or contaminated constitution.

No doubt, however, it is otherwise induced. Those persons engaged in mechanical operations in which acrid or irritating particles are thrown off, as millers, coal-heavers, leather-dressers, the grinders of needles, and the workers in certain minerals, &c., are represented to be very liable to it, and which might be presumed. It has too, been traced to neglected or imperfectly cured rubeola, scarlatina, and other exanthemata, or to chronic eruptions repelled, particularly tetter, and still oftener to an extension of phlogosis, or ulceration of the fauces, either common, or scrofulous, syphilitic, mercurial, scorbutic, &c.

Not a less prolific source, according to my observations, is an elongation of the uvula, which, though it may be oftener an effect of the disease, assuredly also excites it, as repeatedly witnessed by myself. Few, indeed, are the cases of laryngitis without lesions of the uvula.

An irritation from neighbouring tumours, abscesses or aneurisms, moreover, sometimes causes it, and we are told, that caries of the teeth has had in the same mode, a similar effect.

But above all, it exists as an incident of tubercular phthisis. The very first indication of that disease, may be hoarseness, and other signs of laryngitis, and here the lungs are, perhaps, secondarily involved. Equally true is the reverse, or that it proceeds

from an essentially similar morbid condition of the lungs reflected on the larynx. It is observable, in the progress of phthisis, that the upper part of the windpipe becomes sore, and I have known it many times, to be so much affected, as to constitute laryngitis. This might be suspected, independently of any direct proof of the fact, which, however; we have in ample dissections, showing very often such a state of the larynx.

From Andral we learn, that of the cases of phthisis which he examined, three-fourths had ulcerations of the windpipe, and Louis reports that out of one hundred and ten inspected by him, the larynx was ulcerated in forty, the lesion in eighteen of which being chiefly confined in the epiglottis, and the trachea affected in twenty lost.

By adverting to the established sympathy between the two sections of the pulmonary apparatus, through which an irritation at either extremity is felt by the other, it may be conceived how this reciprocity of mischief is produced.

It will be well in deciding on the nature of the case, to examine in the first place, very carefully, every part of the throat, to ascertain its condition. Besides that of the uvula, several of its lesions have a considerable influence over the whole of the respiratory structure, productive of sympathetic effects, so imitative of real or primary laryngeal affection, as sometimes to be mistaken for it.

Certain forms of bronchitis have also, some analogy to laryngitis. Yet independently of other differences, they are distinguishable by the heavy pulmonic oppression, the wheezing and rattling, the œdematous face, and the clear and colourless lips, in the intervals of the paroxysms. But here, as well as in phthisis pulmonalis, and most other diseases of the lungs, doubt and obscurity may be greatly removed by external exploration.

Nor should it be forgotten, in these investigations, that a set of phenomena, closely simulating genuine laryngitis, may be owing to nervous and muscular states, influencing the vocal mechanism.

Cases of this kind, though easily detected, I have seen so frequently confounded, that I deem it proper to direct attention to them. They may be distinguished from actual laryngitis by the positive signs of these conditions, as well as the absence of those denoting inflammation of this structure.

Great pains have been taken in reference to the discrimination

between the laryngeal and tracheal affections, and from the general similarity of their aspect, it is not always readily accomplished.

Except as to an operation, hereafter to be noticed, it is fortunate in a practical relation, that it is not very material. Yet some precision is attainable in this respect, by attention to the seat of the painful sensations, to the greater alteration of the voice, in the laryngeal lesion, to the nature of the cough, which is preceded by tickling, and is more stridulous and spasmodic, and very constantly brought on by any thing irritating applied to the fauces, as gargles or drinks, or food of this description.

Even after a satisfactory determination of these points, there will still remain one to be considered, of greater importance in a practical view, than the whole of the preceding. My allusion is, to the pathological state, as well in kind, as degree, in which respects, especially the former, we are aware how variant the nature, and different the means of cure. No absolute certainty is here always attainable. But by a diligent and skilful investigation of the case, we shall frequently arrive at just conclusions.

Nor in our prognostications of the event, shall we be less perplexed by somewhat similar considerations—the stage of the case, the various conditions of the larynx, which cannot always be appreciated, by any method of determination, and by the existing diathesis. Taking the mildest specimen of the disease, when fully established, and in other particulars of the most favourable character, the cure is exceedingly difficult and uncertain. Thickening of tissues merely, from ordinary inflammation when of long standing, is seldom removed, and the case being connected with a strumous, and still more, a tubercular condition, it is nearly or, perhaps, utterly hopeless. On the whole, I have experienced much less difficulty in relieving those attacks which have come on as sore throat, and where this has continued to form the most prominent feature of the case, the affection of the larynx probably consisting in little else, than a mere sympathetic irritation.

An autopsic inspection sometimes shows little or no inflammation in the mucous membrane. But usually otherwise,—the most common change being that of thickening,—leaving frequently on its surface granulations, or small ulcers, particularly around the glottis, or within its cavity. Lesions of this sort may, indeed, be very extensive, even to the destruction of the epiglottis, and

its immediate connections. Conversions too, of the cartilages are met with, into gritty calcareous matter, mixed up with portions of denuded and carious bone, or mortified, black, and dissolved, so as to resemble wet rotten leather. Cutting into the sub-cellular membrane, it is sometimes dense and solid, its reticulated texture obliterated, and as it were incorporated with the mucous tissue. When the structure is preserved, œdema of it is not unfrequent, or in place of serous effusion, pus is infiltrated through it, or collected in small sacculi, or abscesses.

The trachea may be also granulated, or ulcerated, the bronchiæ very rarely so, according to Louis, he having met with only seven instances of it, while on other occasions, the whole respiratory tube, the upper and lower section, contain tubercles separate or combined with the same productions in the lungs. Besides the latter, however, which may be incipient formations, or in the several stages to absolute maturity, the lungs have sometimes been observed in various other modes affected, and especially by effusions into their cellular texture.

Of the phenomena in the throat, I have only to say that there may be no appreciable change or those already described, or ulceration more or less extensive and modified, as originating from mercury, syphilis, scrofula, or other causes.

My pathological observations on this subject will be concise. It appears that the affections arranged under the generic title of chronic laryngitis, as indeed I have already intimated, are diversified—seated in the mucous, or sub-cellular tissue of one or the other portion, or the whole of the respiratory tube,—sometimes separately, on other occasions in both membranes,—arising from inflammation originating in these, or derived by an extension of it from adjacent structures,—induced by various causes, operating directly or indirectly,—ending in the organic lesions of the parts immediately concerned, or with the several complications previously mentioned.

From the preceding review, the variety of treatment appropriate to the several forms or states of the disease is indicated. But since it is not easy to ascertain exactly the general pathological nature of the case, whether it be common or the specific inflammations, and still less the condition of parts mainly concerned, our practice, I apprehend is seldom guided by enlightened discrimination, or any very definite principles. It is obviously

required to the attainment of success, that in engaging in a case, the first endeavour should be the determination of these points as accurately as possible.

Being persuaded that the case originates in some peculiar cause, as the elongation of the uvula, or other lesions of the throat, and its connections, or the repulsion of an eruption, or derangement of the chylopoietic viscera, or either of the diatheses, to which allusion has been made, exists, the practice of course must be, in some degree, specially directed by such views, and regulated according to the circumstances of the moment. It were foreign to the occasion, to make these considerations at present, the subject of further discussion, they coming with greater propriety, under the history of the diseases, phthisis, scrofula, syphilis, and dyspepsia, to which they immediately belong. Take as illustrative of my meaning, the case of the modified disease, so prevalent among our clergy. Commencing, I have said, in depravity of the digestive organs, the rectification of this apparatus is indispensable to the relief of the secondary and consequent affections. Guided by this principle, I have, at least, cured a host of cases which had, or would have resisted a different mode of management. For reasons, however, already assigned, I forbear, at present, to enter into any practical details.

My observations will henceforward be confined principally to the management of chronic inflammation of the larynx, of the ordinary kind, in a sound constitution, which may, perhaps, be deemed the only case where efforts of cure are much encouraged.

As might be supposed, the remedies to meet the indications here, are bleeding, general and local, blisters, or other counter-irritants, frictions with the emetic tartar ointment, or croton oil, till pustulation is induced, and setons, issues, &c. Great advantage also, is derived from the application, once or twice a day, of burnt alum over the entire surface of the fauces, which is proper, whether there be inflammation or not in these parts, unless it is active or intense. The mode of its operation seems to be, by setting up a new action, followed by a copious secretion of thin fluids, which extending to the larynx, subverts the one existing in its mucous lining.

By this plan perseveringly pursued, relief is undoubtedly sometimes procured. But it very often fails, and occasionally, owing to circumstances not always appreciable, the depletory part of it

urged to any extent, proves positively detrimental, by inducing weakness, without abating the force of the disease, or in any way making a favourable impression. In such an event, we are left nearly destitute of resources, for an opposite course, comprehending the medicinal tonics, and other means of invigoration, are even more pernicious, raising up a degree of excitement that hastens with fearful rapidity, the catastrophe. Treatment of this kind, is here totally misapplied, and is only adapted to cases arising out of, or otherwise associated with, a feeble or cachectic state of system.

On the reduction of the activity of the phlogosis, no inconsiderable confidence has been reposed in an alterative course of mercury, with some of the narcotics, hemlock, henbane, or opium, and ipecacuanha. But I confess that my trials of these articles variously combined, have mostly ended in disappointment,—though, I still think, that they are not to be neglected, and particularly mercury. Holding it to be nearly infallible, a late writer, of good repute, declares, “that in nearly every case not depending on, or connected with disorganization of structure, it will, probably, afford relief, no matter at what period of the disease it is administered, or under what unpromising circumstances.”* He orders it in small or large doses, as may seem most proper to effect salivation, which he supposes essentially necessary to the cure—and in some urgent cases, has given as much as ten grains of calomel, four times a day. “As soon,” continues he, “as its specific influence becomes developed, the disease begins to decline, and it seldom requires more than a week or ten days, to render the cure complete.”

It were well, if this account with ample allowance for the exaggeration of the enthusiasm of the moment, could be verified. Experience, however, has exposed its fallacy, and it affords another melancholy instance how little reliance is sometimes to be placed on medical testimony, owing to hasty and crude conclusions. Long ago, mercury was tried in this city, in every mode, as an alterative and salivant, so often with manifest harm, though now and then successfully, that under the impression of its proving, on the whole, mischievous, the use of it is now nearly abandoned. But we shall presently see, that this is turning from the

* Porter on the Diseases of the Larynx and Trachea.

one to the opposite extreme. As inculcated by the authority just cited, the practice is singularly wanting in discrimination, and partakes somewhat of the character of empiricism. Granting its applicability to certain cases, which he has not adequately pointed out, surely it would be contra-indicated, wherever a tubercular or mercurial diathesis exists, the best evidence concurring to show its baneful influence, in either of these conditions.

It may safely be affirmed, that with the exceptions of perhaps some of the syphilitic cases, and those growing out of certain derangements of the digestive apparatus, the only state in which it is admissible, is that of ordinary inflammation, independent of any general depravity of system, and even under the most favourable circumstances, its use is to be regulated with great circumspection. Thus appropriately administered, I have witnessed in several cases, unequivocal advantage from it.

Emetics, at one time proposed, are now generally confessed to be prejudicial, though I suspect this unfavourable estimate of them has not been very wisely formed. As they may be resorted to with discrimination or otherwise, so will they prove beneficial or the reverse. Conspicuously injurious at an advanced stage of the disease, they sometimes prove of the greatest service in the forming or inchoative stage of it, and especially in those cases blended with considerable affection of the fauces and its immediate connections. The stomach is here essentially in fault, and vomiting occasionally repeated, I have known to prove very successful, even to the accomplishment of perfect cures.

Not much is to be gained from expectorants. Led by analogy, the balsams particularly have been thought to promise fairly, and though this *a priori* recommendation of them is sustained by the unqualified testimony of some writers, I can attach only a very limited value to them from my own observations. There is indeed a plain reason for their general failure in this case. For the most part the disease is deeply implanted in the subcellular texture, where such articles are without power,—they doing good only, when the mucous lining is implicated, either ulcerated or pouring out inordinate secretions, over which, and especially the latter, they have a restraint unquestionably.

Nothing would be more unprofitable than to enumerate the means which have been applied to the cure of the disease in the advanced stages. Connected with great vitiation of system, there

are then usually structural lesions of the larynx,—and of the remedies, perhaps, those now mostly employed are the compound syrup of sarsaparilla, and the inhalation of certain balsamic and vulnerary vapours, as of the tolu, rosin, tar, &c. Excepting under the circumstances which have been defined, of the probable utility of the latter articles when given by the mouth, they must be nugatory in this mode of administration. Generally indeed, they prove so irritating, that they cannot be endured.

From some recent trials I have made, I am inclined to believe that the fumes of iodine and chlorine are deserving of more attention, though still mere palliatives. The only cure I have accomplished by such means, was by mercurial inhalations. Yet it is true, that in the very mildest form of the affection, dependent probably on mere relaxation of parts, the vapours of Hoffman's liquor and laudanum mixed, or of a digest of ether and cicuta, I have known sometimes, to operate beneficially.

Belloc and Trousseau have proposed, where ulceration exists, the direct application of certain articles to the diseased part, to produce cauterization. But a very strong solution of the nitrate of silver, they seem on the whole to prefer, to be dropped into the larynx, by which they profess to have made some very great cures. Not knowing how the fluid is to be introduced, I have never tried the practice, or seen it attempted, and cannot, hence, speak confidently of its utility, or the tolerance that would be given to such a harsh remedy by parts so sensible and excitable. Easier, at least, would it be, and perhaps, some advantage might arise from it, to touch the ulcers of the epiglottis, and around about the glottis, with caustic well fixed in the end of a flexible bougie, or by some similar contrivance.

In œdema of the larynx, I have nothing to add to my former suggestions. The same applications as mentioned then are to be made to the throat, particularly should it be involved in a similar condition. Topical bleeding and vesication or other counter-irritants, or drains, setons, or issues, are usually directed to exterminate the remnant of inflammation, if any is suspected, and to promote absorption of the effused fluid, frictions with the mercurial or iodine ointment are the means. But so far as I have seen, no benefit accrues from these applications, nor indeed from any thing else. It is here, as well as in the instances of abscess,

or purulent infiltrations, that I would again suggest the evacuation of the fluid by an incision or puncture.

Distrustful of medical treatment in the advanced stage, I have for some time pretty much restricted my advice to whatever conduces most to the comfort of the individual, instead of harassing him by unavailing efforts of cure in this and other hopeless states of the disease.

An exception, however, in laryngotomy may perhaps be found to this sweeping condemnation of active practice, which operation has been advised and even performed, under these apparently desperate circumstances, with such success as to merit further trials. By the late Sir Charles Bell a case is reported where life was protracted by it for seven weeks, and which probably might have done well, had not the cure been frustrated by an untoward occurrence. Two other instances are reported by Drs. Porter and Marshall Hall, in which an entire recovery took place, and Professor Regnoli, of Italy, has been no less fortunate in two cases. Mr. Liston has also succeeded in one, and Mr. Cullen, a surgeon of Edinburgh, more recently in another.

That additional proof of the efficacy of the operation might be collected by further researches is not unlikely

Nevertheless, no very sanguine expectations can reasonably be entertained from this resource as a general means of cure. The larynx itself, as we have seen, may be irreparably affected by various organic lesions, or where these do not exist, the trachea or the lungs are so deeply engaged in the diseased action, that no local expedient of this kind can possibly avail. It was owing to these insuperable impediments, that Mr. Lawrence twice failed in the operation—finding in the one instance the membrane so thickened and granulated, as nearly to close the rima glottidis, and in the other the lungs much disordered.

Easy were it to multiply proofs of the inadequacy of the operation, though cases of failure are much less apt to be proclaimed than those of success. Examples, however, have occasionally occurred of the disease, without any serious structural derangements of the windpipe, or of the lungs, and it is to such only that the operation is applicable with any certainty of advantage. Could these cases be accurately determined, there ought, perhaps, to be little hesitation in resorting to it, provided life were endangered by the disease. But the diagnosis from symptoms, is very

obscure, and I am afraid we shall very generally be not a little embarrassed in coming to a just decision.

It is true, that by percussion and auscultation, information might be derived of the state of the lungs, whether they are implicated or not, and probably as to the kind and degree of implication. No light, however, is shed from these sources in relation to the condition of the larynx or trachea, and we shall be left to proceed here mostly on conjectural inferences. This is a question on which we must be controlled mainly by the circumstances of each case, to be determined in a great degree by the medical attendant himself, and I shall not discuss it further. On the whole, in suggesting the operation, I have been influenced not so much by any real appreciation of it, as by the old maxim:

"Anceps remedium, melius est, quam nullum."

Not much have I to say in regard to the regimen in this disease. As to diet, it is to be accommodated to the diversities which it presents in its essential character, as well as its several stages. Enough may it be to state on this point, that so long as any activity of phlogosis remains, it must be low and abstemious, consisting of the farinaceous and other light and digestible vegetable matter or of milk, which is well suited, and under other circumstances, to be more generous and nutritious—always excluding whatever of food or drink that has a stimulating or heating tendency.

During the continuance of the same phlogistic condition, a state of repose ought to be observed, and on its subsidence, exercise freely taken on foot, or in a carriage, or on horseback, whenever the weather admits of it.

Every precaution should be practised in the avoidance of catching cold, and with this view, the individual is to be protected by adequate clothing and cautioned against hazardous exposures.

Not less important is it, that he refrain from unnecessary exercise of the voice—even in conversation speaking in a low tone, and slowly, and if he belong to a profession in which it is to be exerted, instantly to abandon it.

Much may be expected, early in the disease, by a removal to a mild equable climate, and nothing in the advanced stages. It has become of late customary with us to resort to Europe with

this view. No portion of the world is less adapted, and particularly Paris, the residence usually preferred. Cold, damp, and comfortless to the invalid in many respects, and especially from the scarcity of fuel, it at the same time holds out all those attractions to lead him into every sort of indiscretion, and from which he rarely escapes. Most of those known to me who hazarded the experiment, speedily fell victims to it. The same may be said, and with nearly equal force, of the south of France, and of the different countries of Italy, which are also frequented.

Emigration to a proper place, not being attainable, confinement in a room of a regulated temperature, in cold or damp austere weather, will prove the best substitute, and must be enforced. Nevertheless, there are some who urge the freest exposure under nearly all circumstances of weather, and insist, that cold is more favourable to the relief of the disease, than warmth. It is true, that temporary alleviation is sometimes procured by a short subjection to a lower temperature than the individual is habituated. But I believe it is sufficiently demonstrated that any length of continuance under its influence, proves aggravatory, and often fatal in its consequences. As for the cures from this practice which have been reported, I place not the slightest confidence in them, and if any such happened, I presume they were of those nervous or spasmodic affections arising from a state of atony, imitative of the genuine disease.

I have only to add, that benefit sometimes accrues from a sea voyage when judiciously undertaken.

ASTHMA.

DIFFICULT breathing, which constitutes the most prominent feature of this disease, seems to have attracted medical attention from the earliest antiquity. The Greek writers, as we learn from Celsus, distinguished it according to its gradations,—calling it when moderate, *dyspnœa*—when more severe, *asthma*—and when of the utmost violence, *orthopnœa*. In the progress of time, these terms underwent considerable fluctuations in their meaning and applications, till finally that of *asthma* was made to embrace every case of embarrassed respiration, whatever might be its nature, or the manner in which it was induced. But this condition presents such infinite varieties in these respects, that a more precise and limited definition was required. Later authorities, therefore, restrict its use to a peculiar form of this affection—recurring in paroxysms, each of which, having a quotidian aggravation, coming on towards evening or in the night, and subsiding in the morning, usually with more or less expectoration.

The symptoms of the disease may be divided into such as precede or attend a paroxysm. Most writers agree in representing disorder of the stomach or some of the collatitious viscera as preliminary to an attack, evinced usually, by distension of the *primæ viæ*, from flatulence, with sour eructations,—*gastrodynia*,—*cardialgia*, constipation, and tenderness of the abdomen, painfully felt on going to stool. But though general, this state does not, at least, in any very conspicuous degree, universally prevail. Cases I have seen, where there was an entire exemption from it, or so faintly presented, as scarcely to attract attention

As precursory to an attack, however, there may be nearly always remarked, uneasiness of the head and of the eyes, drowsiness, lassitude, fulness of the stomach and bowels, *borborygmus*, and discharges of wind, with heaviness of breathing, stricture of the chest, *præcordial anxiety*, depression of spirits or irascibility

of temper, and a general feeling of uncomfortableness, all which are more sensibly experienced in the evening.

In this state, the patient may go to bed, with the anticipation of an attack, which shall come on while still awake—or he falls asleep, out of which he is aroused at once, or for a few minutes seems to be bewildered by a sort of incubus, half conscious of his situation—though unable to command self-possession. The paroxysm is mostly announced with an increased sense of thoracic tightness and oppression, without any acute or positive pain,—soon followed by difficult, laborious, and wheezing respiration, in which the muscles subservient to that process appear to be implicated, attended usually, at first, by a dry spasmodic cough—though ultimately, by copious secretions of phlegm or mucus, resembling the sputa in bronchitis. The distress is aggravated by motion, and so much by the recumbent posture, that in many cases, it cannot be endured at all, or only for a short period. The circulation is commonly little affected. But sometimes it is preternaturally weak with the cutaneous surface cold, and the countenance pallid and haggard. While, in other instances, it may be full, vigorous, and decidedly febrile—the skin warm,—the face flushed and tumid,—the eyes protuberant and injected, with dryness of the nostrils and fauces. This is the asthma plethoricum of some of the nosologists. The paroxysm being of extraordinary violence, from the obstruction of the bronchi or pulmonary circulation, the countenance has a purple hue—and such is the degree of anhelation, that, to prevent suffocation, the patient is propped up, and exposed to the fresh air, by the opening of doors and windows,—he feeling as it were, “as if the room were too small, and too confined, for his breathing.”

An attack continues for several hours, or during the greater portion of the night, progressively mitigating towards morning. But, with this abatement, some unpleasant sensations of the head, chest or *primæ viæ*, or all, still remain throughout the next day, and, on the approach of evening, or towards midnight, there is a repetition of the paroxysm. It is in this manner, that with alternate remissions and exacerbations, the case proceeds for a time, generally not more than three nights, till it is relieved by our remedies, or, as oftener happens, expends itself by some critical discharge, perspiration, urination, and especially by expectoration

of digested mucus. The individual may then be restored to his natural health.

Death rarely occurs in the paroxysm, and when it does, we shall find immediately to precede it, a most distressing orthopnœa, frothing of the mouth, livid countenance, a weak tremulous pulse, or total failure of it, great depression of general strength, and sometimes more or less paralysis of the upper extremities.

Becoming chronic, asthma may terminate in some disorganization of the lungs or heart, or great blood-vessels, or of the abdominal viscera followed by dropsy of the cavities of the chest or abdomen, or by diabetes, and occasionally in lesions of the brain or nerves. But it also endures without such degenerations, and the person attains even to old age, with tolerable comfort,—while in medium instances, where no essential structural injury exists, his health becomes greatly impaired, and he lingers out an existence of complicated wretchedness, till the disease undergoes a fatal exasperation, or he is otherwise released by death.

In the recurrence of asthma, there is much difference, though generally, it does not observe very strictly the law of periodical movement. Examples are recorded of its renewal on an average weekly, monthly, annually, or even at a more distant period, once or twice, for instance, in the course of a long life. But sometimes it is more exact in its repetitions. Thus Heberden relates a case of the return of the paroxysm every seven years for six successive periods, and several are reported of a monthly reversion, with perfect precision. This is what I consider to be genuine asthma contra-distinguished from other forms of anhelation of a more continued character, hitherto very improperly confounded with it. That the disease may in time lose its peculiar feature of periodicity is undoubtedly true. But then it parts with its primitive identity, and assumes a new shape, dependent on causes entirely different,—disorganizations of structure in the lungs, or remoter parts, which impede respiration, and otherwise imitate asthma.

In reviewing the etiology of asthma, it will not be easy to separate the remote from the exciting causes, with distinctness or propriety. The predisposition to it has been supposed to be intimately connected with a peculiar conformation of structure, consisting mainly in a narrow ill-shaped chest, or contracted larynx, trachea, or bronchi, with a temperament of extreme sen-

sibility. But I have seen the disease so frequently without any such peculiarities, that I do not think they can exercise any considerable influence in its production. As to temperament, especially, I am persuaded it is as often incident to the phlegmatic, and perhaps the sanguine, as to the nervous.

That asthma is hereditary, cannot be doubted, and even to some extent, descending from generation to generation, and pervading a family of children—of which, examples have come under my own observation. On what the transmission depends, is not at all intelligible—most probably, however, on a constitutional similarity, though this is sometimes so little apparent, that it must be rather assumed than demonstrated.

Not much can be ascribed to age or sex in the development of the susceptibility to the disease. Contrary to the prevalent opinion, that it mostly occurs in the middle of life, I have certainly met with an equal number of instances in children, or prior to the season of puberty, and scarcely fewer among old persons. Nor have I discovered any marked difference in this respect, between males and females, and cannot help suspecting the accuracy of estimates leading to an opposite conclusion, particularly that of Frank, of Vienna, which makes the liability of the former as six to one. Not unlikely this error has proceeded from a loose generalization of affections, which, however analogous in some of their features, were still not of a real asthmatic nature.

From a deficiency of authentic information, it is not easy to appreciate justly the influence of station, habits, and occupations in this case. But according to my own experience, the sedentary, indolent, and luxurious of the higher orders of society, are more disposed to the disease, than the reverse, or the low, the active or labouring classes. It is, indeed, seldom to be met with in such, unless engaged in operations, in which some acrid effluvia escape, irritating the respiratory apparatus, and even then it is questionable, whether the affection may not be rather bronchitis.

Nearly an equal degree of uncertainty prevails as to the tendencies of climate. The common notion, however, is that the disease is of less frequent occurrence in the mild, and equable, than in the variable, or in either extreme of latitude, the hyperborean or torrid regions, and which is not improbable,—though I confess that I have not remarked any material difference in the effect of our so diversified seasons. Every condition of weather

occasions it, the hot and cold,—the wet and dry, or a dense or rarefied atmosphere—and such is its capriciousness, that what proves favourable to one individual, is adverse to others. But independently of the sensible states of the air, there would seem to be some occult quality belonging to it, that is more decidedly operative on the asthmatic constitution. The pure air of the country, especially in elevated positions, I have found, with very few exceptions, more pernicious than that of cities, and even the suburbs of these, less propitious than the central and populous parts. Many instances have come under my own view of persons affected in this way, who, very comfortable in the latter, were rendered otherwise in the former situation, among which, is that of a friend of mine, who can seldom walk to the edge of the city with impunity, and never goes into the country without an attack. It sometimes happens, too, that individuals may spend the day comfortably in any rural position,—though on the approach of evening, are unavoidably seized. Three or four instances of the kind I have known, and of which, there is now living in Baltimore, a gentleman by whom I am informed, the fact is strikingly illustrated in himself. Close to the town, he owns a villa remarkable for its general healthiness, at which he has not slept for many years on this account,—escaping however, all intimations of an attack during the day.

Moreover, positions nearly contiguous in the heart of a city may vary widely in this respect, even the several stories of the same house. Each of these statements, at least, is verified by one case which was the subject of my care. Called to visit a young lady from the South, having a violent paroxysm of the disease, I was told that she derived an immunity from it during a recent residence in Paris, by selecting a medium story in a hotel in a particular portion of that city, and that whenever she quitted the apartment, a paroxysm soon came on, from which she was speedily relieved on returning to it. Curious to make the experiment, I was seconded in the desire, by her own anxiety to change her lodgings, where she had severely suffered, and in a very short time she went to another house in the neighbourhood, in which she entirely escaped for several months. Compelled, however, to leave it, she fixed her abode at the distance of a hundred yards, in a street no less thickly built, and here, she had scarcely any exemption for weeks. On her moving into a different quarter

of the city, I witnessed a complete verification of the statement she had made me. As long as she occupied the chamber on the second floor, she was almost nightly harassed by renewals of attacks, which were prevented by her sleeping in the room above. Even by dining below, her respiration was on several occasions seriously affected.

Among the causes obviously exciting the disease, may be enumerated, the inhalation of the fumes from lead, or arsenic, or mercury, or other minerals, or the smoke of tobacco, or the dust of the same article, or the pungent or fetid odours, or luscious perfumes, emitted by a great number of flowers or substances, as the rose, the hyacinth, fresh hay, red beets, mellow apples, sealing-wax, musk, and particularly ipecacuanha. Examples of attacks to be traced to each of these sources are reported, and as regards several of them, my own experience has supplied me with further proofs.

In an individual whom I attended, the disease was twice brought on by sleeping in a room where a rose-bush in bloom was placed,—in another, by a similar exposure to some pots of hyacinths—in three girls, by the emanations in the process of manufacturing cigars—and there was formerly a student of medicine in the University of Pennsylvania, who assured me that he could not weigh out a dose of ipecacuanha without being affected. Much such a case as the latter is reported in the Transactions of the Royal Society of London.

Certain irrespirable gases, as carbonic acid, escaping from the chimney of a dormitory, is said to have had the same effect under like circumstances. But here too, or at least, as regards smoke, we meet with occasional instances of opposite results. Professor Graves tells us, that he attended two individuals at the same time, of nearly the same age and appearance,—the attack in the one being brought on by a smoky chamber, and in the other differently induced, was speedily relieved by sitting in a room filled with smoke. Long experience had taught him the efficacy of this remedy, and what is curious, it was only the smoke of bituminous coal that displayed any beneficial influence,—that from peat, or perhaps, other fuel proving aggravatory. Easy were it to extend the illustrations of personal idiosyncrasies or caprices of the disease. Cases are to be met with where the paroxysm was at once mitigated by placing the patient in the tainted atmosphere

of a closed apartment of a room, or even by shutting the door for some minutes,—and of darkness having the same effect.

Most, or, perhaps, all of the preceding causes operate directly on the pulmonary organs, to which are to be added, such as affect them secondarily, or by irritations transmitted from other parts of the system. It has been known to proceed from worms or offensive ingesta, sometimes in moderate quantity, or excess in eating or drinking, or inanition from long fasting,—and constipation of the bowels. Derivative impressions, indeed, from the whole of the abdominal viscera, and above all, the uterus, as manifestly induce it, and we shall presently see that still more is imputed to lesions of the thoracic contents.

It were well, had a closer attention been directed to the influence of spinal irritations in the production of the disease. Cases having unequivocally a location in the upper portion of the vertebral column, I have so repeatedly seen, that I am persuaded of its being a more common origin of it than heretofore suspected.

Entertaining the notion of the frequency of the disease from the repercussion of eruptions, *asthma exanthematicum* has been erected into a distinct species in some of the nosological arrangements. But in consequence of the permanent character of the affection, when in this mode induced, it seems to me doubtful, whether it should not be considered rather as dyspnœa, which, in the present acceptation of the term, is continued oppression, and not intermittent or paroxysmal, as in genuine asthma. Nevertheless, though they may not come within the definition I have given of the disease, I cannot withhold the communication of some very interesting instances of the kind, I have met with.

The first of these, was that of a gentleman, who having repelled a wide-spread tetter from the inside of the thigh, was soon after seized with the most afflicting anhelation, which continued with little remission, for nearly a year, resisting every variety of treatment, till the reappearance of the tetter, when relief was procured.

More extraordinary, was that of a man, who having the same sort of eruption on the scrotum, succeeded as he supposed, in curing it. But almost immediately afterwards, he began to sneeze with scarcely any interruption by day or by night for several months. The irritation, however, being transferred from the nasal to the pulmonary tissue, was followed by a change of

sneezing for a very oppressed state of the lungs, which for a length of time proved intractable to all remedies. Two days after consulting me, and before the treatment suggested could have had any effect, the tetter, spontaneously, replaced itself in its original position, and his health was restored.

Nearly about the same period, I had under my care a lady, for a scaly eruption on the back of the neck, extending into the hairy scalp, by which she was much annoyed. It had long existed, occasionally receding and again recurring. By a mild application it quickly disappeared, and in the course of a few months showed itself on the forearm, gradually assuming a more squamous character. In this state, she left the city, and, as she presumed, was cured of it by another physician. But from that moment, heavy dyspnœa supervened, which shortly proved fatal.

Nor are we without proof of similar consequences from the suppression of natural or habitual discharges, sometimes proceeding from amenorrhœa, or a stoppage of hemorrhoids—and Andral has supplied us with a case ascribed to the healing of an old ulcer of the leg. It may also be owing to a metastasis of some other diseases, and rheumatism or gout especially. The late Professor Barton, who was a victim to the irregular states of the latter disease, I have seen to suffer extremely from asthma, thus occasioned—and still more frequently, a friend, whom I have attended in more than one hundred similar attacks in the last twenty-five or thirty years. Coming on in him almost invariably in this way, gout will so continue for a few days, when usually fixing itself on some joint, the whole of the thoracic distress immediately ceases.

Besides this series of physical agencies it is perfectly ascertained that the disease may be excited by certain moral emotions, as, the exasperation of rage, the agitation of fright, the impulse of joy, the depression of grief, &c., where there is extreme affectability in this respect. But in thus spreading out its etiology, I am very far from being satisfied, that in all instances, I have practised a just discrimination in the selection of the causes of asthma. Confiding too much in authority, as well as from inherent difficulties, I do indeed apprehend, that I may sometimes have fallen into the common error, of confounding very different affections

with it, and particularly bronchitis, and other modifications of dyspnœa.

As I have defined it, asthma can scarcely be confounded with any other disease. The suddenness of its paroxysms, their entire subsidence, and periodical recurrence, with the severity and peculiar nature of the breathing sufficiently distinguish it for the most part. The cases which bear the nearest resemblance to it, are bronchitis, pulmonary œdema, hydrothorax, some of the affections of the heart, as angina pectoris, and certain dyspeptic states. To discriminate it from these, where a comparison of symptoms fails, an appeal may be made to external exploration,—though not much is positively gained by either percussion or auscultation in pure uncomplicated asthma. The only physical sign it has indeed, of which I am aware, is, that the respiratory murmur, sometimes scarcely to be heard, may be, at once, restored fully, by voluntarily holding the breath, and then speaking, slowly and distinctly, it operating to the relaxation of the bronchial muscular fibres, whose contractions have a contrary effect. The utility of the means mentioned, consists in the detection of other analogous affections having more definite signs,—and thus, while showing that the case is not asthma, its real nature may be revealed.

Contracted early in life, in well constituted individuals, or where excited by trivial or transient causes, it is generally a curable disease. As to the former, even if our remedies do not eradicate it, time, and the changes of puberty, will be apt to effect it. But occurring in more advanced age, or with an ill-formed chest, or as an inheritance, or continuing till organic lesions take place, we shall rarely be warranted in pronouncing a favourable decision. It is here "*morbis maxime terribilis*," as it was originally called by Willis. Yet cures sometimes take place, or, at least, there is a cessation of the disease after a very lengthened continuance, and under circumstances where such lesions might have been suspected, several instances of the kind having seen myself.

Dissection has disclosed very different phenomena in asthma. The fact is, till recently, we had no precise view of the disease, and hence most of the reports of the anatomical characters are little to be trusted—these belonging in many instances to organic lesions of parts, of which the respiratory affection was merely an incident or perhaps wholly independent of them.

No trace of a morbid process can sometimes be discerned in the lungs or elsewhere. This had long been affirmed, and is now established by the concurrent testimony of Corvisart, Laennec, Andral, Bouillaud, Cruveilhier, Leroux, Ferrus, &c. Death here is probably occasioned by spasm. But generally, there is phlogosis of the mucous lining of the lungs, diffused or in patches, or merely punctated, attended most frequently by exuberant secretions. Examples, however, of a great deficiency in this latter respect occur, and then tumidity of the tissue exists. Nor would it seem that either their substance or pleural coverings always escape congestion or inflammation—and occasionally œdema or emphysema of the cellular texture, together with some cardiac lesions, and a change of colour or softening of the brain, or effusions into it, have been remarked. The spinal marrow has been little examined. Cases, however, are reported, in which the only appreciable lesion was of the nerves—in one of these, at the origin of the pneumogastric, the precise nature of which is not mentioned,—in a second an ulcerous condition of it,—in a third, a small tumour along its course,—and in a fourth, an osseous deposition in the centre of the pulmonary plexus.

But in protracted and long continued asthma, as might be expected from the complications and degenerations to which it is liable, every species of disorganization has been met with, as well of the thoracic as abdominal viscera especially, and which is shown to be the tenor of appearances from the time of Morgagni, Bonetus, and Lieutaud, down to that of Baillie, and Rostan, and other very recent cultivators of morbid anatomy.

Notwithstanding these necroscopic reports not much seems to be distinctly understood as to the pathology of asthma. It were a very unprofitable task to offer a retrospect of the idle conjectures or crude speculations of early times, in relation to the subject, and I shall hence decline it. Cullen, and most of the more modern writers suppose, that the disease consists in a spasmodic constriction of the muscular fibres of the bronchi, which interrupts or disturbs respiration, and consequently creates all the rest of the distressing symptoms. These fibres not having been shown, it was deemed at the time a fatal objection to the hypothesis. But since the satisfactory investigations of Soemmering, Cruveilhier, and especially Reisseissen, who have demonstrated their existence both transversely and longitudinally as regards

these tubes, it can no longer be alleged. Bree, however, contends, with some ingenuity, that in the leading and most common form of the disease, the immediate cause is irritation in the air cells of the lungs, occasioned either by ærial acrimony or effusions of serum, here plainly mistaking the effect for the cause, at least in one of these cases. Every practitioner must have observed, that in what is called spasmodic asthma, particularly, the dispnoea occurs long before the increased secretion of the mucous surface.

Denying that spasmodic asthma is a disease of the lungs, it is conjectured by Wilson Philip, that its seat is in the upper part of the windpipe, which becomes so contracted by spasm as to prevent the ingress of air, and brings on the violent struggles for breath characteristic of the paroxysms. Cases answering to this description, I have seen, though the affection of the larynx has appeared to me merely additional to the more general one of the bronchi, and at all events, from their rarity ought to be held as anomalous occurrences.

The phenomena of the disease have been ascribed, by Parry, to vascular engorgement of the mucous lining of the bronchi, productive of such a degree of tumidity of it, as mechanically to intercept the entrance of the air into the lungs. This may sometimes be the fact, though I suspect such a condition is always secondary, and consequent on antecedent spasmodic irritation.

By his autopsic inquiries, M. Rostan has been led to the inference, that the disease, never nervous or spasmodic, depends on an organic lesion of the lungs, heart, or large vessels. But such a notion, however correct as to some varieties of dyspnoea, cannot be sustained in its application to genuine asthma. This, as we have seen not unfrequently, makes its invasions suddenly and disappears, leaving for an indefinite period an uninterrupted state of health—re-excited by slight circumstances, and relieved by remedies which can have no control over the organic lesions alleged, which indeed, have been proved sometimes not to have existed.

Nearly as objectionable is the conjecture of Broussais, by whom the immediate dependence of the disease on the pulmonary apparatus was also denied, he supposing it to proceed from spasm of the heart, preventive of the due distribution of the blood through the lungs. Georget, on the contrary, discarding both the lungs

and heart as the primary seats of it, refers its origin to the brain and spinal cord—though with scarcely more satisfactory proofs of the fact.

Most of the speculations on this point are marked by extreme vagueness. Dyspnœa, however induced, or whatever might be its particular nature, having long received the title of asthma, the most discrepant affections were held to be identical, and described accordingly. By the same want of discrimination, I apprehend that the writers just cited, have been seduced into the adoption of such erroneous hypotheses.

To me it is highly probable that asthma is essentially an affection of the bronchi in the shape of spasm. The phlogosis, effusions, and other morbid phenomena, occasionally observable, are, according to this view, to be considered merely as results of this pre-existing spasm. Careful observation, however, will lead us to consider some of the spasmodic movements hitherto referred to the bronchi themselves, as actually existing in the upper portion of the trachea, or in the diaphragm, intercostal and other muscles subservient to the respiratory function. As the muscular apparatus in vomiting is excited, when the stomach is offended, so is that of the pulmonary organs; to discharge or overcome irritations in the lungs, and may, in their efforts to this end, become irregular and disorderly in their actions. Either spasm of the bronchi, or excessive secretions from their mucous surfaces, or both, are the direct causes of such endeavours in the asthmatic paroxysm. But on other occasions, it may be perceived that the chief aim of the muscles of respiration, is to dilate the chest, so as to allow greater freedom to the admission of air, and in the performance of this office are often more naturally exerted.

Not unlikely, I think, as has been surmised, the immediate seat of the primary irritation, in many instances of this disease, may be the pneumogastric nerves. Looking at their distribution, several of the most prominent of the affections of the case become very explicable on such a supposition. Yet it is no less apparent to me, that it does also arise occasionally in any one section of the nervous system. That I have seen it proceeding from the spinal and ganglionic nerves, I am as well assured as of any fact. Nor when we advert to the intimate connection of the nerves from every source, is there any difficulty in the hypothesis. It may be deduced from all which has been said, that I consider asthma

as originating in nervous irritation, soon productive of irregular spasmodic movements, often followed by congestion or inflammation of the pulmonary tissues and excessive secretions, which condition not being arrested, may lead to very serious and multiplied lesions of structure.

From the very indefinite notions of asthma, to which I have more than once alluded, as having prevailed, the disease has been separated into a great number of species or varieties. By Sauvages, eighteen are made, and he scarcely exceeds some other writers. But this surely is a minuteness of classification, not warrantable by the nature of the case, and is calculated rather to perplex, than to illustrate the management of the disease.

The ordinary division of asthma, and that usually adopted, is into spasmodic and humoral—the one being dry, and the other attended with profuse secretions, the first mostly incident to the early, and the second to the advanced period of life. Even these two forms, though occasionally observable, have no specific character, and cannot claim to be nosologically distinguished. The difference between them seems to depend only, as in the instance of catarrh, on a secreting or non-secreting state of the mucous surface of the lungs, each of which mostly takes place too, in the progressive stages of the case.

Whatever pathological views may be entertained, the treatment arranges itself into such as is proper during the paroxysm, and in the interval, to retard or prevent its return, or in other words to eradicate the disease. It is necessary to premise, that I shall apply my remarks only to its curable state. Disorganization having taken place, the case changes its character, and may be deemed hopeless, or demands another course for its relief.

Contemplating merely the prominent symptoms of such an attack as I have reference to, no practitioner would hesitate probably a moment, about the propriety of venesection. It seems to be called for, by the congestion of the lungs, by the laborious respiration, by the suffused countenance, sometimes by activity of the circulation, and by a variety of other considerations. Yet it is confessed, that the remedy is an ambiguous one, and while by many it is utterly condemned, even those who occasionally recur to it, allow, that the advantages derived, are not at all correspondent to what might be expected. My conviction, however, is, that though our anticipations from it may not be realized

in the fullest extent, venesection in the more violent paroxysms is useful, and even indispensable. As a general rule, it should be restricted to the febrile cases, or where there is much general vascular disturbance, and here, it will be found, or I am greatly deceived, to abate the vehemence, as well as shorten the duration of the paroxysm,—and indubitably, it obviates those injuries of the lungs and other structures, which lay the foundation of the chronic affections of which I formerly spoke.

Cases, however, occur, where venesection is inadmissible, though there may be present no inconsiderable pulmonary oppression. It is in this state, that topical depletion is indicated, and may be beneficially employed. As in nearly every other pectoral affection, however, the blood should be drawn from the back of the neck and between the shoulders. Taken from these parts, it is generally more effectual, and becomes indispensable, should there be irritation of the upper portion of the spine. An exception to this practice as has been alleged, may possibly be found in the dependence of the case on a primary or predominant lesion of the ganglionic nerves of the epigastrium, where the application might answer better over this region.

Local bleeding should be followed by counter-irritations and as to the place of establishing which, the same consideration may govern us.

Greater unanimity, perhaps, exists, in regard to emetics than any other remedial means. Most of the older writers urge them strongly, and the same recommendation of them has been generally continued to the present times. But some are opposed to the practice, as hazardous or altogether inefficient—though for reasons so frivolous, that so far from being influenced by them, I habitually prescribe vomiting in the paroxysm, and very frequently with marked success, especially in children. The nature of the case should not materially influence us. Whether to resolve spasm, or to remove vascular congestion, or to empty the bronchi of excessive secretions, or to act on the skin, it is equally serviceable. Confessedly of the highest utility in croup and bronchitis, why should it prove otherwise in a case so analogous to these affections?

The ipecacuanha is here preferred, which I believe was originally proposed by Akenside, the physician and poet. The squill however, has been greatly praised, and it is not at all unlikely

that it is well suited to the disease, and especially when it occurs in old people, whose lungs are mostly oppressed, and hence require to be emulged or unloaded, by an emetic active and stimulating. Much too, has been said of the increased value of the combination of the two articles. The sulphate of zinc, moreover, is not without its advocates, among whom was the late Professor Kuhn, who employed it in this, as well as in every other spasmodic affection of the lungs, or their appendages, from a conviction of its superior antispasmodic properties.

Emetics in nauseating doses, are by some substituted for active vomiting, and the comparative utility of the two modes seems not to be satisfactorily determined. To me, however, it is clear, that the one or the other, in this, as in all other instances, is to be directed according to the stage, and circumstances, of the disease. To break down the attack, as it were, vomiting is infinitely more powerful, while in reference to the expectorant or diaphoretic effect, the nauseating doses answer better. Commonly the ipecacuanha is given for this purpose. But in old people the more stimulating expectorants will be demanded—the squill, the syrup of garlic, the assafœtida, the gum ammoniac, the seneka, &c.

Many speak favourably of the lobelia inflata, and some extravagantly—with which I have no experience. From its employment I have forborne, on account of its deleterious properties as exhibited in the administrations of other practitioners, which I long ago witnessed. Of these poisonous articles I am terribly afraid, and should really experience some “compunctious visitings of conscience,” were I to perpetrate death by such hazardous experiments.

Never should any of them be prescribed, unless its superior efficacy is fully guaranteed by unquestionable witnesses, which surely cannot be maintained in relation to the present instance. The lobelia is an acronarcotic poison, so closely allied to the nicotiana, in its effects, that it has received the popular title of *Indian tobacco*. Chewed, it excites similar sensations in the mouth and throat, and swallowed, even in moderate quantity, it produces nausea, vomiting, purging, sweating, extreme prostration of the circulation and muscular power, with nervous tremors, giddiness, dilatation of the pupils, perverted vision, and sometimes convulsions and death.

Chiefly directed as a nauseant, it is however also to vomit, in

which application it proves very active, and hence probably, is designated the *Emetic weed* in portions of the country. It constitutes the main ingredient in the infernal processes of the *Steam Doctors*, an audacious tribe of quacks who have, and continue to desolate the land. Their practice shall not get, at least from me, any countenance directly or indirectly.

The juice or tincture of the berry of the Poke, (*Phytolacca Decandria*,) another of our native plants, I think I have seen decidedly serviceable in one case, and I have heard much of its efficacy. The late Professor Physick esteemed it highly.

No great importance is attached to purgatives in the treatment of asthma. Being induced, however, by constipation, this condition, at least, should be removed. But there are other purposes to be met by purging. Certain it is, that I have derived advantage from the use of calomel, especially, as well as an evacuant of the bowels, as by the property it possesses of unloading oppressed lungs proceeding from undue accumulations of blood or viscid secretions, it being, in the latter view, a very efficient expectorant.

Nothing seems to be more reasonable from the received notions of the nature of the asthmatic paroxysm, than that opiates should be of service in it, and they have accordingly been liberally prescribed. Bree, a writer on the disease, whom I formerly cited, says, however, that they are uniformly hurtful—and such is not a rare opinion. The truth is, that the effect of them varies at different stages of the paroxysm, they being always misapplied, I suspect, in the height of it. But it being in part subdued by the preceding active means, opiates, then are very serviceable, and especially when combined with a diaphoretic, as in the Dover's powder. The state of the skin has, indeed, I suspect been not sufficiently regarded in the management of asthma. But when we advert to its influence over the lungs in health and disease, it becomes obvious how important it must be to revive or promote its action. On the breaking out of perspiration, warm and diffused, I have usually found a very decided alleviation to accrue.

Not content with opiates alone, every article allied to this class, including the narcotics and antispasmodics, cicuta, hyoscyamus, belladonna, musk assafœtida, ether, &c., has been successively tried singly, and variously combined. What I have said in rela-

tion to opiates, is equally applicable to their congeners, with this difference only, that I believe the whole of them are of inferior pretensions. The best opiate merely to calm irritation is the elixir paregoric, and especially when the disease occurs in aged people, to whom it is peculiarly well suited, in this and every other pectoral affection. Yet disagreeing with the patient, the pure opium or some other of its preparations may be tried as well as the kindred articles mentioned.

During the paroxysm, an alleviation is sometimes procured by drinking intensely cold water—and in other instances, by sipping hot water, or other hot beverages, such as very strong coffee without cream or sugar.

Exposure to cold fresh air, by throwing open the doors and windows, is beneficial,—though I have heard that the reverse, or placing the individual in a closed, heated apartment, has proved more so, in some rare instances, and I know, that sitting over a fire with the feet applied to it, very often assuages the paroxysm. Bright sunshine, or artificial light, is mostly salutary, to which, however, there are exceptions, absolute darkness agreeing better with the case.

Large doses of the fixed alkalies have been recommended, and there is much evidence to the utility of vinegar freely given. Let there be no surprise at my mentioning such opposite remedies! This is not the only disease, where means diametrically the reverse of each other are found serviceable, and which we employ without the usual guide or reason. It may be humiliating to the pride of science, though it is indisputably true, that often in practice, we are compelled to throw all our boasted principles behind our backs, and trust alone to the lessons of experience in the spirit of empiricism.

To relieve the lungs when oppressed by inordinate secretions, inhalations of vapour are obviously pointed out, and have been recurred to in many instances with success. Even the steam of water is not without utility, though it may be improved by various medications—one of the best of which is, that with laudanum—the vapour of iodine and of chlorine has also been lately proposed, very confidently.

During the reign of pneumatic medicine, it was very much the fashion to use, with this design, the factitious airs. In the reports of Beddoes, Thornton and others, on the subject, it will be per-

ceived, that these gases are most enthusiastically praised. By one of them it is affirmed, "that the effect of oxygen is altogether miraculous—the moment it is inspired, the livid colour of the countenance disappears, laborious respiration ceases, and the functions of all the thoracic organs go on easily and pleasantly." But subsequent and more faithful trials have proved that no such benefit accrues, either from oxygen, or any one of the irrespirable gases, alone, or united with atmospheric air, and this suggestion, like many other similar extravagances which have had an ephemeral existence, is dead, and gone to the "tomb of all the Capulets."

The insufflation of atmospheric air, is perhaps more entitled to attention. By Charenti, an Italian writer; we are at least told that he himself is uniformly relieved almost instantly by it, and that it has proved equally successful in other persons by whom it has been tried. The pipe of a common bellows is to be introduced in the mouth, the nostrils closed by compression of the fingers, and the air to be forcibly pushed into the lungs.*

Being in some degree, a modification of the practice of inhalation, the smoking of certain substances, and partially breathing the fumes, may be here noticed. My allusion is more particularly to the stramonium, which has attracted a great deal of notoriety as a palliative of the paroxysm. It is used in a common pipe—the root, the stems, or leaves of the plant selected for the purpose, being previously washed, dried, and bruised. That it affords relief occasionally, I cannot doubt, independently of other evidence of it, having witnessed it in several cases. An elderly gentleman of Baltimore, who for a very long time has suffered severely from the disease, assures me that it uniformly alleviates, and often entirely subdues the paroxysm, promptly and decisively. Like other remedies, however, it generally fails, and, perhaps, only does good in certain forms of the disease, which hitherto have not been accurately discriminated. The cigar, also, proves sometimes palliative, and especially in persons not habituated to the practice of smoking. Never have I witnessed any injury from either article, in this application of them, and am incredulous of the statements of European writers by whom their use is so seriously

* *Anthologia di Firenze*, Sept. 1835; and *Philada. Jour. Med. and Phys. Sci.* xiv. 374.

deprecated. The same, however, cannot be said of opium, which many years ago I tried, and found, though cautiously used, was productive of unpleasant, and sometimes even of alarming cerebral disorder.

Magnetism, electricity, and galvanism, have been adopted as remedies. The first two may be dismissed as of no, or very doubtful value. The reports regarding the last, are very curious, proving that through the galvanic agency, the paroxysm is speedily mitigated or removed, and by perseverance in its use, permanent cures are often accomplished. Not a little is affirmed of its efficacy by Mons. Andrieux, in a recent memoir on the subject, who has pursued the practice to a great extent—and his statements are interesting. By M. Martin it is also said in corroboration, that he has frequent opportunities of observing the extraordinary success of it, as conducted by Andrieux in the Hotel Dieu, having even “known patients in whom the paroxysms were so severe and frequent as to render it impossible for them to engage in any occupation, entirely restored to health by it in the course of a few weeks.” He on the whole assigns to it the highest among the means employed in the disease. Wilson Philip also bears testimony in its favour, and many other attestations of the same kind might be cited. Conceding the fact of its utility, of which, however, I am doubtful, we must be irresistibly drawn to the conclusion that simple asthma, as has been contended, is really little more than a mere nervous or spasmodic affection.

We come to the second indication or to the treatment in the interval of the paroxysms, with a view to the eradication of the disease. To be at all successful, it must be accommodated to the several conditions in which the system may be left. These are exceedingly diversified, and being for the most part connected with some positive lesion, considered as a distinct affection, and as such, discussed, I shall at present give to the subject a very cursory notice.

Frequently the stomach is disordered, and when so, the management in every respect, is the same as dyspepsia. The remedies in the latter case will under similar circumstances, be found equally appropriate to asthma, and above all the martial preparations. They have been greatly extolled by Bree, and independently of their general power and effects, would seem to have further

claims in this instance, from their reputation in those nervous affections to which asthma sometimes bears a resemblance.

In cases observant, with some exactness of the law of periodicity, other tonics are resorted to, among which are the sulphate of quinine, the arsenical solution, the oxide and sulphate of zinc, the sulphate of copper and the nitrate of silver.

Characterized by a disposition to spasm, the state is relieved by the antispasmodic, formerly mentioned, and when nervous irritability preponderates, by opiates, and other similar articles. Bearing an analogy to chronic bronchitis, the balsamic and terebinthines, especially the tar-pill, are greatly relied on, and which latter I deem eminently useful. Lastly, on a manifestation of effusions, mild purging, and the diuretics, constitute the proper means.

When the case can be distinctly traced to a special cause, as, obstruction of the catamenia, the suppression of hemorrhoids, the recession of eruptions, or to misplaced gout, or spinal or similar irritations, our efforts should be directed to its removal as speedily as possible, the means of doing which need not be indicated.

Little else remains than to indicate the proper regimen, to which in my opinion more consequence should be attached, than to the therapeutic treatment.

Even where no dyspeptic symptoms exist, some restrictions are demanded in the course of living. No trespass, either in eating or drinking, is ever to be permitted, and constipation should be avoided. Not less important is it to guard against the austere vicissitudes of weather, by warm clothing, and especially by wearing flannel next to the skin, protecting the feet at the same time in the most effectual manner.

Exercise, even labour is very beneficial. Long journeys have frequently removed the disease—and contrary to what we might expect, the same effect has been obtained by the exposures and hardships of military life. During the late war when the volunteers of Philadelphia were called out, and encamped several months, part of the time in winter, two individuals of my acquaintance, who previously had been dreadfully harassed by the disease, entirely escaped while thus employed, and have since been nearly exempt from it. Many similar facts are recorded.

The disease becoming habitual, a trial of a change of residence should be proposed. As, perhaps, in every other pulmonary

affection, a mild and equable climate is generally to be preferred. But the precise situation is to be very much determined by the experience of the individual himself, though, as already intimated, for the most part, a low is better than an elevated position, and a large city than a village or the country.

Concerning a vicinity to the sea-shore, there is equal uncertainty as to its influence. Commonly, I have found it salutary, while in some instances it proved so prejudicial, as not at all to be endured. Cases will, indeed, occur, where, as soon as the individual breathes such an atmosphere, a paroxysm comes on. But, should an exposure of this sort agree with him, immense benefit will result from it and sea-bathing. Not, however, being convenient or admissible, the cold bath may be substituted, the efficacy of which is improved by the addition of salt, and subsequent frictions, so as to induce a general glow of the surface. The warm bath, which has been recommended by some writers, I have found injurious.

On a review of what has been said of the treatment of this disease, it is impossible to resist the conclusion, that great as the recent efforts have been to reduce it to some definite principles, it is still amenable to the charge of empiricism. As must always happen, this is owing to the want of a correct pathology. It may be true, that our notions regarding it are not so absurd as those of former times, when necroscopic investigations were less practised. To the attainment, however, of correct and useful views on the subject, such as shall serve to conduct us to successful practice, much remains to be accomplished. We can at present, really claim very little certainty in the management of any stage or condition of the disease. The remedies which control one case, utterly fail in another, of apparent identity, and hence the number of expedients, and diversities of plans, that have, and continue to be adopted for the relief of the disease.

Limited and precarious as are our powers in this respect, it becomes a duty to enjoin our patients to be vigilant of the approach of an attack, and the moment we are apprised of it, to endeavour to arrest its further progress, which, comparatively, is easily done. Coming on as catarrh, it is in this inchoative stage to be treated accordingly. Being mild, a stimulating pediluvium, with an opiate diaphoretic, and some warm beverage, will generally be sufficient, provided perspiration is excited. But

when the indications are more menacing, the loss of blood, with sinapisms to the lower extremities, are also required. These failing, an emetic of ipecacuanha should be directed, and after puking, the Dover's powder, with the usual promotives of its operation.

By such a course, I have in many instances, averted attacks, and had the gratification of preventing an intensity of suffering which can only be appreciated by those who have witnessed the effects of a severe paroxysm of the disease.

ANGINA PECTORIS.

IN 1768, a disease was described under this title by Heberden, in the second volume of the Medical Transactions of London, then supposed to be a new one. Doubtless, it had pre-existed, and seems, indeed, to have been noticed by Sauvages, Morgagni, and others, but so casually and imperfectly, as not to have commanded attention.

Curiosity, on the appearance of the publication just mentioned, was directed to the disease, and though since carefully investigated, its pathology is still very obscure and undefined. Besides its original title, many other names have been applied to it, expressive of the peculiar notions of its nature entertained by those by whom they were respectively conferred, among the most recent of which, are sterno-cardia, and sternalgia.

The disease is of a decidedly paroxysmal character. An attack of it, in most instances, according to my observations, is preceded by considerable derangement of the primæ viæ, presenting some of the phenomena of indigestion, as flatulence, sour eructations, cramps of the stomach, torpor of the bowels, and pains of the limbs. But it sometimes comes on without any, or a very slight premonition, usually while the individual is walking, or making some other exertion, in which case, he suddenly pauses, and endeavours to catch at something to support him, or slowly seats himself, as if apprehensive even of this effort. The face is pale, with a haggard expression, a cold sweat breaks out, there is a painful sense of constriction of the chest in the cardiac region, or at the sternum, extending to one or both arms, the left arm more commonly, at first, no further than the insertion of the deltoid muscle, though successively, it may reach the elbows, wrists, and sometimes even the extremities of the fingers. This, however, is a very mild paroxysm, which will often subside on the with-

drawal of the exciting cause. As appertaining to a more violent attack, it may be stated, that in addition to pain in the chest and superior extremities, amounting in some cases to agony, having indeed been compared by Laennec to the piercing of nails or the laceration of the claws of animals—there is extreme irritability of the stomach, anxiety, palpitations, or constrictory pain in the heart, a sense of suffocation, which is rather from tightness and fulness in the chest, than real difficulty of breathing, with many other affections, seemingly to denote the immediate extinction of life, and it has been remarked, that patients in this state of suffering almost always believe that they are actually dying. During this period, the pulse is variously affected—sometimes little changed, on other occasions irregular or intermittent, often weak, and is described as being full, active, and bounding. Each of these states I have witnessed. The paroxysm is of very indefinite duration, from a few minutes to one or more hours, according to its severity, and still more, the inveteracy of the disease—it proving, for the most part, lingering and severe, or the reverse, in proportion to the long or short standing of the case, though probably, the average period is half an hour of unabated endurance. Equally does this hold in relation to the frequency of its recurrences, the interval in the commencement of the disease being distant, progressively less, till finally it is so much curtailed, that there is scarcely any exemption.

Great, however, as is the distress in the paroxysm, it seems not early to affect the constitution, nor to entail any permanent mischief. The individual often apparently enjoys good health in the intermissions, and performs all his functions naturally, and without embarrassment, till a short period before an attack. By a protracted continuance, however, the system begins to give way, which, as before stated, is announced by disorder of the chylopoietic viscera, and with a group of dyspeptic symptoms, there are impeded respiration, pale and doughy countenance, soft flabby integuments, œdema of the lower extremities, and the other manifestations of cachexy. But such an issue is comparatively seldom, it more frequently happening, that in anticipation of these degenerations, the case abruptly ends during a paroxysm, fatally.

The disease is said usually to select for its subjects the middle aged, and men more than women, especially the robust and corpulent, with short necks—of habits indolent and sedentary, and

very often, the gouty and rheumatic. But it is by no means confined to individuals of the former description. In several cases, which have come under my notice, the persons were quite otherwise—or slender, and of delicate constitutions. Nearly the same remark is made by Jurine. “Of the persons,” says he, “who have come under my care, as many were of a spare as full habit. “I have seen,” continues he, “only one under the age of fifty, and only one woman who died of it.”

Forbes affirms, that of eighty-eight cases related by different authors, only eight or one-eleventh of the whole occurred in females, and of eighty-four, whose ages are recorded, twelve only were under fifty years of age.

The disease, as previously mentioned, is ordinarily excited by some motion, as walking, and particularly by ascending a flight of stairs, or a hill, or any other acclivity, and is more apt to be so, when the stomach is full. It may, however, be induced by the most trivial agencies, in very susceptible habits, as by sneezing, coughing, loud speaking, straining at stool, or by the indulgence of passion, or by other mental emotions or perturbations.

Many persons have died in a paroxysm brought on in this way, and among others the celebrated John Hunter. Naturally very irascible, he got into a quarrel with Gunning, an old wayward surgeon, one of his colleagues at St. George’s Hospital, about the treatment of a compound fracture, for whom entertaining great contempt, his anger became exasperated to rage, and down he fell, and soon expired. This anecdote I derived from the late Professor Physick, then one of his pupils, who, I think, witnessed the occurrence.

Nevertheless, a paroxysm of the disease has occurred in a state of absolute repose, the person being aroused from sleep by it.

The case with which angina pectoris will be most apt to be confounded is asthma. But it may generally be distinguished by a minute attention to the circumstances incident to the history of each affection. The paroxysms of asthma come on usually at the close of the day, or in the night, continue much longer, are characterized by a heavy dyspnoea, with wheezing, and are relieved by exposure to fresh air, and subside gradually towards morning. Neither are they excited in the same way, nor by similar causes, nor marked by the position or acuteness of the

pain in the sternum, arm, &c. or by several other distinctive and peculiar features. But where these diagnostics do not prove sufficient, an appeal should be made to percussion and auscultation, and which will also tend to clear up the obscurities as to other pulmonary and cardiac affections that have an analogy to angina pectoris.

It may be summarily stated, that in cases of no inveteracy of character, cures may generally be effected. But where the case is fixed by time, and is attended by any organic lesions or a decayed constitution, the result is the reverse, and death sooner or later inevitably takes place. Forbes declares that of sixty-four cases, the event of which is recorded, forty-nine ended mortally. Every fatal termination which I have witnessed, amounting to several instances, was as sudden as the electric shock—the movements of the heart seeming to be instantaneously arrested.

In several instances of the disease, not the slightest morbid appearances could be traced. But sometimes the heart has been found variously diseased, by the ossification of its valves, or those of the larger vessels, or of the coronary arteries, or by depositions of adipose matter, so as to impede its functions, or by effusions into the pericardium, or by simple hypertrophy. Not the least common occurrence, perhaps, is a pale, flabby, softened state of the muscular structure of the heart, so much so, sometimes, as to be easily mashed between the fingers, like wetted paper or putrid meat. In the language of a late writer, “it is a fact, that there is scarcely any mal-conformation of the heart or its blood-vessels, that has not been occasionally found after death, from what would be considered angina pectoris—while on the other hand, individuals have fallen victims to the affection, fully marked, and the most accurate post-mortem examination has not been able to detect the slightest indications of structural derangement.”* The morbid phenomena, in some instances, have been found in other parts, the heart being entirely exempt, at least appreciably, as water in the pleural cavity, and adhesions of the lungs, thickening and other changes of the mucous membrane of these organs, dilatation of the bronchi, œdema of the cellular tissue, an abscess of the mediastinum, scirrhus of the pylorus of the stomach,

* Unwin's Compendium of Theoretical and Practical Medicine.

and enlargement of the liver, ossification of the cartilages of the ribs, &c.

As already intimated, our knowledge of the pathology of the disease, is not at all precise or satisfactory, owing in part to the great diversity of phenomena exhibited in post-mortem examinations, which have served rather to perplex, than to guide our speculations. No doubt many of these lesions had no immediate connection with the disease, either as cause or effect—and, perhaps, exercised little influence over it. There are others, however, which, though not concerned in occasioning it, may be deemed its products or consequences, where the case is chronic, and has preyed, as it were, on the constitution. Nor is it improbable, that, from the novelty of the disease, it has not always been well understood, and some analogous affections have been mistaken for it. Before these reports, therefore, can be fully accredited, we ought to have a minute and faithful history of the cases to which they relate, and these subjected to a careful scrutiny. Let the facts thus be ascertained, and we shall then move on in our pathological inquiries with some certainty of success.

By several writers on the subject, the disease is held to be spasmodic,—though the part immediately implicated, seems not to have been designated or understood. This hypothesis is rendered probable, by the general complexion of the case—its causes, symptoms, and cure—and by its resemblance to the diseases confessed to be of that character. Entertaining such a conviction it is called by Darwin, *asthma dolorificum*, and by Elsner, *asthma convulsium*. Butter refers it to a spasm of the diaphragm and other muscles of respiration—and D. Schaeffer, to an incomplete paralysis of the heart—and a periodical spasm of the pulmonary vessels. It has been ascribed, by Rougnon and Baumes, to ossification of the cartilages of the ribs, preventive of the expansion of the chest necessary when the circulation is accelerated, and which determines a stagnation of blood in the heart, and by Haygarth, to an abscess of the mediastinum. Brera, Portal, Latham, Zechinelli, and Averardi, suppose it to be owing to displacement and compression of the heart, from tumefaction of some organ of the abdomen—and Fothergill believed it to be occasioned by obesity, particularly by a collection of fat in the chest, and sometimes, as he thinks, it may be symptomatic of water in this cavity, or in the pericardium.

By Parry it has been attempted to be shown that it is a species of syncope, denominated by him syncope anginosa, caused by an accumulation of blood in the heart, from an ossification of the coronary vessels—in which view he is supported by Jenner, Bostock, Burns, Kreysig, and many other authoritative writers.

To this opinion it may in general be objected, that there is no evident connection between the effect and the cause. That an ossification of these vessels may be productive of great disturbance in the animal economy, is exceedingly probable, though such is not uniformly the result, without however affording reason to believe, that the peculiar agony and distress of angina pectoris, would be the consequence. The cause being permanent, the disease too, should continue at all times, with little or no abatement. But so far from this happening, we are told by all the writers, with which my own observations coincide, that there is often very good health in the intervals of the paroxysms. Nor dependent on such a lesion, should it be curable. Even Parry admits, that one case was cured by the Bath waters—and we shall hereafter see, that recoveries frequently take place.

Completely, however, to refute this notion, it is only necessary to mention, that in several instances of the disease, which terminated fatally, no such morbid appearances could be discerned about the heart. Laennec expressly says, that he has examined several subjects, who had laboured under it, and in none of them did he find the coronaries ossified. But Recamier goes further and declares, that he never witnessed it in any instance of all those which he had inspected. Cases, indeed, are recorded by Morgagni, Senac, Watson, and Corvisart, in which ossifications had no effect whatever of the kind. The same thing has been remarked by Shaw, in his *Manual of Anatomy*, who says, that in many old people, neverhaving had the slightest symptom of the disease, he “has found the coronary arteries like tubes of bone, through their whole course.” Cooke in his treatise on the digestive organs, confirms this report. Numerous instances of this lesion of those vessels, he says he has met with, without a symptom of the disease.

By a distinguished writer of our own country, the late Professor Hosack, it is conjectured, that the disease proceeds from a “plethora of the blood-vessels.” Considering this to be scarcely better founded than the preceding hypothesis, I shall not enter

into any detailed examination of the arguments, or facts, by which it is endeavoured to be sustained. It may be sufficient for my present purpose, merely to observe, that even allowing the fulness and irregularities in the circulation contended for, as the basis of the hypothesis, which I am not disposed to do, as uniform concomitants, these, I should take to be rather the effects of previous irritation or excitement, than the cause of the disease. Do we not also know, that such a condition of the vessels can exist without inducing angina pectoris? Were fulness and irregularity in the circulation only required, for the production of the disease, instead of a rare, would we not have it as a common occurrence? The fact, moreover, is, that angina pectoris, though oftener, perhaps, attacking the plethoric, is to be met with, as before said, in the feeble and attenuated. Notwithstanding these formidable objections, the hypothesis has been espoused by Forbes, without, however, adverting to them, or bringing any fresh or valid support to it.

Taking every thing into view, Jurine is led to consider the disease as a nervous affection, which opinion he sustains by a long train of reasoning. Comprised in a few words, his arguments are deduced from the unexpectedness of the attack, its suddenness of termination in death or restoration to health, the nature of the exciting causes of a paroxysm, the equality and regularity of the pulse, the peculiarity of the respiration, the painful sensation extending to the upper extremities, and finally, the method of cure, by antispasmodics, nervines, opiates, &c.

"The proximate cause," says he, "is connected with an affection of the pulmonary nerves, which disturbs the functions of the lungs, impairs the decarbonization of the blood, and produces, previously to an attack, the pain in the sternum. The morbid affection of the pulmonary nerves, must in time be communicated to the cardiac plexus, and affect the heart and vessels, secondarily. The imperfect decarbonization of the blood lessens its stimulating powers on the heart and lungs, gives rise to reiterated attacks, until this stimulus being exhausted, occasions the death of those organs, and then of the brain."

Laennec has adopted the same view of its nervous pathology, with this difference, that he considers the seat of the affection may vary according to circumstances. Thus he states, that when there exists simultaneously, pain in the heart, and lungs, we may

presume that the affection is principally seated in the pneumogastric—and on the contrary, where there is simply stricture of the heart, without pulmonary pain, or difficulty of breathing, its site is in the nervous filaments, which the heart receives from the great sympathetic. But other nerves may also, at the same time, be implicated, either by sympathy or from direct anastomosis, and the branches of the bronchial plexus, particularly the cubital, are nearly always so. The anterior thoracic, originating in the superficial cervical plexus are, moreover, frequently affected, and this is sometimes further the case with the branches derived from the lumbar and sacral plexes, when the thigh and leg participate in the attack, which occasionally happens.

That the disease is a species of neuralgia I am entirely persuaded, commencing for the most part in the pneumogastric nerve, and spreading in different directions, as other nerves may become involved. The derangements of the heart, and other structures, with which it is sometimes associated, I hold to be coincidences or effects, and not the cause, since, among many reasons which might be adduced in corroboration of this, the disease has undoubtedly prevailed independently of such organic lesions, and conversely, these have existed, without occasioning it. Cogently is its neuralgic character sustained, by the well established fact of its proneness to alternate with similar affections in other parts, as sciatica, lumbago, tic douloureux of the face, gastralgia, muscular spasms, paralysis, or, at least, a loss of sensibility in portions of the body. But, what is the immediate cause of that irritation of the nerves, inducing the neuralgic condition, giving rise to the subsequent phenomena of the disease? This is a question, which hitherto has not been clearly answered. That it is, in many instances, at least, derived from irregular gout, which misplaced, thus operates as an irritant to the nerves, and probably first of those of the stomach, seems highly probable.

In support of this view of the pathology of angina pectoris, it may be remarked, that mostly the subjects of it are of the period of life, the constitution and habits, liable to irregular arthritic affections, well known to be protean in their character, exhibiting every diversity of shape and aspect, and particularly of asthma:—that, in nearly all cases, an attack is preceded or attended by more or less derangement of the alimentary canal, manifested by flatulence, sour eructations, cramps, and costiveness:—that the

pain goes off reversely from that in which it comes on, subsiding first at the extreme point, and the paroxysm closes with belchings, &c.: that in the intervals of the attacks, the individual enjoys for the most part good health, till, by long continuance, the constitution becomes shattered. These are particulars in which it very closely resembles atonic or misplaced gout, and it may be added, in confirmation of the stomach being the original seat of the disease, that the disturbance begins in it, and that of the lungs, or of the heart, invariably presents more the appearance of secondary, than of primary affections.

The phenomena sometimes revealed by post-mortem examinations, do not in the slightest degree invalidate this hypothesis. They are, indeed, very much such as might be expected in structures long exposed to the disorganizing influence of gout, and which have actually occurred, where there was no doubt of the existence of that very disease.

What, however, completely establishes my faith in the occasional arthritic nature of angina pectoris, is, the history of several supposed cases of that disease, which, after a long continuance, with the ordinary symptoms, and treated accordingly, terminated in unequivocal gout.

Case 1.—The first of these cases was that of a distinguished member of the bar, aged fifty-seven years, of slender form and temperate habits, to whom I was called in the night during the winter of 1811. The moment I entered his chamber, I recognized all that sort of distress which characterizes this disease. He told me, that he had for several years previously, been subject to attacks of angina pectoris, for which he had been treated by Dr. Kuhn and Dr. Wistar. His pulse being active, with great agony in the region of the heart, he was bled copiously, and suspecting gout, though assured he was not liable to it, sinapisms were applied to the feet, and the carbonate of ammonia, with wine whey, freely administered. In the course of a few hours, arthritic swelling seized on the knee-joint, with the occurrence of which, all other uneasiness instantly subsided. By such a course of management, as will hereafter be detailed, he recovered his health, never having afterwards an attack either of angina pectoris or gout.

Case 2.—In the spring of the same year, I was requested to visit a lady in the country, of middle age, great corpulency, and

of indolent or sluggish habits. The account she gave me was, that for a considerable period, she had suffered extremely from various thoracic uneasiness, which had been pronounced by the same distinguished physicians, to be angina pectoris, and treated accordingly. The attacks, she told me, were then so readily excited, even by the slightest exertion, that she was compelled to remain almost stationary in her room. Learning that both of her parents, and particularly the mother, were gouty, though she had hitherto escaped, I thought it advisable to venture on a practice dictated by the supposition of its existence in her case, and accordingly, after the loss of a pint of blood, directed that her feet should be immersed morning and evening, in a warm mustard bath, and thoroughly rubbed,—to take the carbonate of ammonia, and to use moderately sherry wine. Not deriving any essential benefit from this treatment, she came to the city, and on the very afternoon of her arrival, I saw her in a violent attack of the disease. Cupping was ordered between the shoulders, and over the cardiac region, and a pair of blisters to the ankles, after a stimulating pediluvium. During the night, she had a paroxysm of podagra, which completely relieved the embarrassment of the chest, and from that time, till 1830, when she died of dysentery, she had no return of the anginose affection, though annually more or less of regular gout.

Case 3.—In March, 1813, I met Dr. James Rush in consultation in the case of a middle aged gentleman of robust make, and plethoric condition, who for several hours had laboured under a paroxysm of angina pectoris, to which disease he had been a martyr for many years. With his case I was familiar, having often attended him before, as the pupil of the late Professor Rush. His sufferings, at the moment of our visit, were very distressing. Having been bled previously, to which he always resorted on an attack, we ordered the carbonate of ammonia, wine whey, and sinapisms to the lower extremities. To our great satisfaction, we found him, on our return after breakfast, entirely relieved by a fit of podagra, which had taken place in our absence. With orders to continue the remedies till our next visit, we left him. But deeming himself well, these were omitted, and he arose from his bed, and seated himself by the fire, thinly clothed, especially as regarded the feet. In this position, while engaged in cheerful conversation with a friend, he suddenly exclaimed that

the gout had quitted his foot, and seized on his heart, and in a moment expired.

Case 4.—In the spring of 1824, I was requested by Dr. Physick, to visit with him, a gentleman from the country aged about fifty, who informed us, that for several years he had been sorely afflicted by a complaint, considered by all the physicians whom he had consulted, as angina pectoris. The history given us of the case, embraced most of the prominent symptoms of that affection. He told us that attacks of it were of very frequent occurrence, and brought on by the slightest causes, from one of which he was then suffering partially.

As the ordinary practice had utterly failed, we determined to treat the case as irregular, misplaced gout, and with a view of drawing it to the extremities employed the customary revellents, with carbonate of ammonia and wine whey. On the third day of our attendance, the gout became fully fixed in the elbow joint, and in every other respect he felt perfectly well. Most unhappily, however, having omitted the remedies during the night, he arose in the morning to be shaved, and while the barber was occupied in that office, getting very angry with him on account of his awkwardness, he insisted on performing it himself, (as he had regained the use of his arm, from the cessation of the arthritic swelling.) But scarcely was the razor in his hand, when he complained of sickness of stomach, with excruciating pain in the left side, and sank lifeless on the floor.

Case 5.—In the autumn of 1824, I was consulted by a gentleman of Baltimore, who had previously been under the care of some highly respectable physicians, for this disease. He was then in the meridian of life, of originally vigorous constitution, somewhat impaired by a generous mode of living. He told me that he had constantly dyspepsia, and occasionally after a full meal, or when walking quickly, was seized with violent pain in the chest, extending down the left arm, and with excessive embarrassment of respiration. The idea of gout he discarded, as belonging neither to himself nor immediate progenitors, but was willing that the case should be so treated, and with written directions to this effect returned home. Three years afterwards, he called to assure me, that his health had been perfectly restored by an attack of gout, which came on some months after having formerly seen me.

Case 6.—From the same city, and not long afterwards, one of our most distinguished men, meeting me accidentally, submitted his case to my consideration. The history of it, which he gave me, left no doubt on my mind of it being angina pectoris. Gout had here, unequivocally manifested itself on several occasions, and uniformly with relief to the thoracic affection. Emphatically expressing my conviction of the character of his case, I dismissed him with directions for the management of it. Whether he followed my advice I do not know. But after enjoying very good health for many years, having been an active and distinguished member of the Senate of the United States, and a laborious practitioner of the law, I understood, that arising in the morning, with some fugitive gout about him, he suddenly expired, from what was deemed an attack of the heart.

Case 7.—During the summer of 1830, I was written to by a lady of Louisiana, who transmitted to me a full statement of her case by her medical adviser, which was so strongly characterized, as to leave no doubt of its being angina pectoris, and such it was viewed by him. Though there was little reason to suspect either hereditary or acquired gout, I suggested, on the authority of the preceding cases, that it should be managed under this impression of it, and I had the pleasure to learn subsequently that having had an arthritic attack in the wrist, she recovered.

It were easy from my own experience to supply further illustrations of the correctness of the hypothesis which I am endeavouring to support. But I have afforded the most striking instances, and to proceed with recitals of this kind, might be tedious.

But while urging its adoption, I wish it to be done with proper limitations. Because of the many striking examples of the gouty nature of the affection, it does not follow that it should be so universally. Neuralgia proceeds from diverse kinds of irritation, and I can discern no reason why this modification of it may not likewise. My study always, is to avoid the common and pernicious error of too close a generalization. By showing that a considerable portion of these cases is of a peculiar character, and requiring a peculiar management, a great practical advantage is gained.

It was once my conviction, that this pathological view was original with me. But I have discovered that Butter, in a small treatise on the subject, entertains nearly the same notion, and

hence denominates the complaint "Diaphragmatic Gout." Even he, I have also ascertained, has been anticipated by Elsner and Schmidt, the latter of whom in conformity to his particular notion of its nature, entitles it "Asthma Arthriticum." Withdrawing, therefore, all claims to priority in this respect, with alacrity I "render unto Cæsar, the things which are Cæsar's," and as I trust, we may all "unto God, the things which be God's."

The preceding review abundantly confirms the remark, which I made on the imperfection of our knowledge of the pathology of angina pectoris. It may be deduced from it, that we are in possession of little else than mere hypotheses, each one having formed his own, on no other foundation than the facts supplied by a few cases or dissections. These varying considerably, a complexional hue has accordingly been given by them to the opinions of those by whom they were respectively observed.

The treatment of this disease is necessarily divided into what is proper during the paroxysm, and in the interval, in reference to a radical cure. As soon as possible the patient is to be placed in a state of rest and tranquillity. Next, where the symptoms are urgent, and the pulse tolerably vigorous, we are to use venesection, and to prove effectual, the quantity of blood detracted must be large. Ten, fifteen, or twenty ounces are to be taken at once—and we may sometimes find in the more violent cases, a necessity for repeating the operation in the course of a very short time. The fact is, that the case may be of such a nature, as to admit of no delay, and, as in some similar emergencies a feeble and timid practice is inevitably fatal. It is therefore, a good rule to urge the lancet till relief is afforded, or as far as we can consistently with safety. But should this general depletion be forbidden, or prove ineffectual, cups or leeches may be applied with great utility to the back or cardiac region, and a blister to the breast. The bowels are then to be opened freely, with some prompt purgative, and I prefer a combination of calcined magnesia, Epsom salts, and the tincture of colchicum, with an aromatic, to any thing else.

That the course I have recommended, differs widely from that indicated by most of the European writers cannot escape observation. Considering the complaint as spasmodic, they resort pretty much to the class of means, the best suited, in their estimation, to overcome this form of diseased action, such as opium, ether,

musk, camphor, assafœtida, oil of amber, hyoscyamus, belladonna, &c.

No doubt, either in the incipient stage of the paroxysm, if it be mild, or when it is in a measure subdued by depletion, this treatment will very often answer well. It is precisely what I would do under such circumstances, and have done, with the greatest advantage. Given at the very commencement of an attack, a dose of laudanum or ether may afford relief, and either of these articles, or the musk julep, is not less effectual after depletion. The point for which I contend is, that the paroxysm being completely formed, and of a vehement character, attended by severe cardiac spasm or engorgement, can only be subdued or at least, that it is more speedily and effectually subdued, by venesection, and its auxiliary evacuations, than by any other means. Yet where the strength of the patient is greatly depressed we must resort to venesection with circumspection, lest in such state, the system should not react, and we might produce irreparable mischief.

Emetics were, at one time, recommended in the paroxysm, and there is some evidence to their efficacy. But on a more extensive trial, they were found, though occasionally useful, often injurious, and I am inclined to believe, are now abandoned.

To invite the disease to the extremities, is an indication never to be lost sight of at this period, and to effect which, stimulating pediluvia, and sinapisms or blisters, with all the other measures employed under similar circumstances in irregular, or misplaced gout, are here applicable. By this course, I have sometimes succeeded in affording speedy relief, as was shown in several of the cases related.

This brings me to the consideration of the remedies usually directed in the interval of the paroxysm. Examining, however, what has been done in this part of the treatment, it will be seen that it has been conducted on no enlightened principle. Though the pathology of the disease be still dark, we may, at least, determine in most instances, the cause of it, and the condition of system with which it is associated. As in every other case, these constitute the main foundation of successful practice. Considering the disease as mostly of an arthritic nature, I have been very much influenced in the management of it, by such a view. Being of recent origin, and of course, independent of any structural lesion,

I treat it in every respect, as I would misplaced gout, more unequivocally marked in the same position. My plan, in a word, is, impressively to inculcate the importance of studiously avoiding all the exciting causes of a paroxysm. To this end, the diet must be light and digestible, the bowels be so regulated as to obviate constipation, and exercise in a carriage or on horseback, be moderately used. Let it be recollected, that in some of these cases, when the slightest movement on foot brings on an attack, or proves highly distressing, any degree of exercise may be taken in the modes just indicated. In the case attended by Dr. Physick and myself, which was formerly mentioned, this was remarkably exemplified. We were told by the individual, who was a lawyer, that though he could not walk a short distance between his office and the court-house, without bringing on a paroxysm, he could go thither, and plead a cause, provided he was transported on a horse or by any vehicle, and had even performed long journeys comfortably, by such conveyances.

The remedies are topical and general, and with the former I shall commence. Every practitioner confesses the importance of establishing some counter-irritation or drain in this disease. It was formerly the custom to accomplish this by a perpetual blister to the chest, but of late, the peculiar irritation from the emetic tartar plaster or ointment, seems to be preferred, and is now very generally substituted. The latter application I do not approve of, either here, or scarcely in any case. Endermically employed, tartarized antimony is very apt to nauseate, and otherwise distress the stomach, attended by prostration of the vital forces, of which, I have seen the clearest proof, and the pustulation ultimately taking place, is painfully irritating, sometimes so much so, as to prevent sleep, or even composure. Nor is it certain, that it exercises always any salutary revellent powers. When extensively applied, it seems to me, to operate rather to change altogether, the natural actions of the skin, than to excite them, very like some of the exanthemata, or other morbid poisons, or a scald or burn, productive of positively baneful effects. By far the best counter-irritant, is an epispastic, frequently renewed, and never kept on longer at a time, than merely to redden the skin.

Yet scarcely less is said of the efficacy of issues introduced into the inside of the thighs, by which alone, there are recorded not fewer than eight or ten cures, proceeding too from such au-

thorities as Macbride, Darwin, &c. &c. As encouragement to this practice, it is stated by Blackall, that one of his patients, who had never for a single week been free from the disease for ten years together, lost every vestige of it, for the last nine months of his life, during which he suffered from ulcers of his legs.

Laennec has very confidently proposed a remedy, with which having no experience, I merely mention on his authority. It is the magnet used in the following manner. He applies two strongly magnetized steel plates of a line in thickness, of an oval shape, and bent, so as to fit the part, one to the præcordial region, and the other exactly opposite on the back, in such a manner, that the magnetic current shall traverse the seat of the affection. Without claiming infallibility for this remedy, he avers, that it has succeeded better in his hands than in any other, as well in relieving the paroxysm, as preventing its return.

The general treatment usually consists chiefly of those tonics, and nervines and antispasmodics, so much relied on in all the nervous or spasmodic affections, proceeding from debility or relaxation. The bark and valerian had at one time a high reputation, and Jolly extols the sulphate of quinine combined with opium and ether, but none of these or any other of the vegetable tonics, are now much used. More confidence is placed in the mineral articles, and especially in the preparations of copper, zinc, and the nitrate of silver. Cures are reported to have been performed by each of these medicines—and two very remarkable cases illustrative of the remedial powers of the last named article are recorded by Dr. Cappe.* Efficacious however, as these may prove, they are, I think, decidedly inferior to the martial preparations.

Fowler's solution of arsenic, has been recommended by Dr. Alexander,† and subsequently by Sir G. Blane, who gave it with advantage, combined with digitalis and mercury.‡

Where there is a strong propensity to spasm, the articles formerly mentioned, may probably be called in with advantage, though hitherto, I have met with no case in which they were required. The chylipoietic viscera being deranged, attended by vitiation of the secretions, an alterative course of mercury

* Lond. Med. and Phys. Journ. iv. 221.

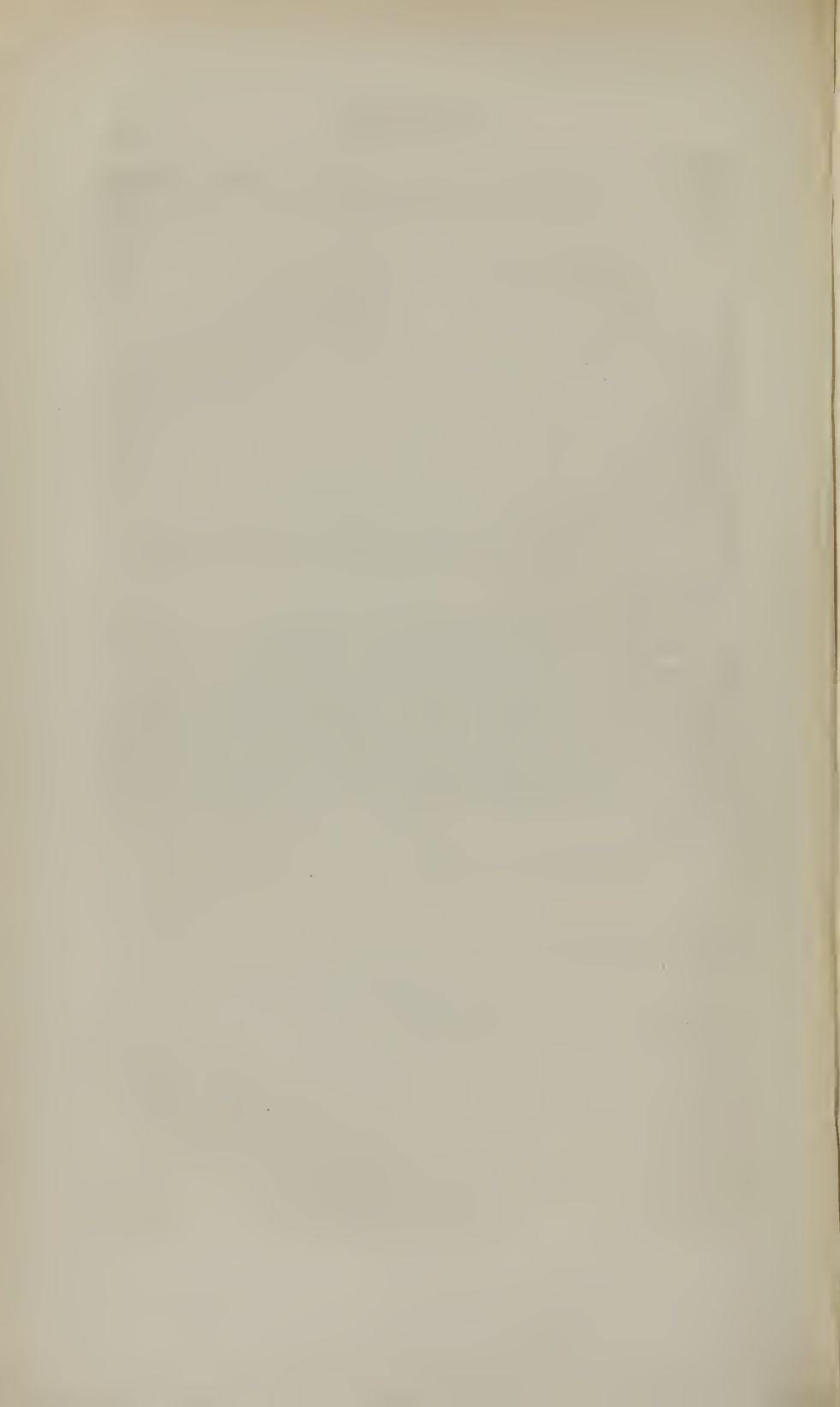
† Med. Commen. xv. 372.

‡ Med. Chirurg. Trans. iv. 136.

should be instituted, and the case proceeding from derivative irritations of organs, the precise pathological condition of these must be ascertained, and removed by the appropriate means.

As preventive of an attack, when such is strongly manifested, plethora should be guarded against, by venesection or purging, or by reduction in the mode of living, adopting the lightest possible articles of food. In those cases where the paroxysm is apt to occur at night, an opiate at bed-time, is recommended by Heberden, and from which, I have seen very decided advantage. That the disease may depend on diversified modes of action, I have already admitted, and hence demands no inconsiderable difference of treatment. Keeping, however, steadily in view, its general arthritic character, I think we shall be supplied with a most useful practical guide. Early adopting it, I have managed the disease accordingly with few exceptions, and so successfully, that I cannot help urgently recommending an imitation of the same course.

Whether the cases which I have met with, were of genuine angina pectoris, I will not positively say. Certain it is, however, that they were marked by the ordinary symptoms, and most of them considered as such, by some of the highest of our medical men who concurred with me. Yet, we are not to expect uniformly to cure this disease. Cases of it inveterately fixed by time, are commonly attended by some organic lesion, and when this happens, they will prove wholly intractable to any and every form of practice.



ON
SOME OF THE DISEASES
OF THE
STOMACH.

THE peculiar importance of this organ in the animal economy need not be insisted on. It occupies, perhaps, the highest rank, and possesses the widest influence, owing to its extensive nervous connections. By any diminution of the gastric energy, according to a noted aphorism, "*Ventriculo languet, omnia languent*," the whole frame, corporeal, moral, and intellectual, is enervated, and every other viscus, or part of the body, not excepting the brain itself, may be more seriously injured without destroying life, than it. Even the concussion from the wind of a passing ball, has sometimes proved fatal.

Contemplating the vast dominion which it exercises over the living system, it was by one of the earliest physiologists emphatically denominated the animal;—by another, the conscience of the body;—and has been thought to be the seat of the soul itself. But the most philosophical of poets has better described it, and assigned some of its functions.

"It is the storehouse, and the shop
Of the whole body. True it is,
That it receives the general food at first,
But all the cranks and offices of man,
The strongest nerves, and small inferior veins
From it receive that natural competence
Whereby they live."—SHAKESPEARE.

In a more detailed inquiry, I might illustrate and enforce the importance of the stomach. But this, in part, would involve physiological speculations, foreign to my province, and to a cer-

tain extent, also, lead to an anticipation of what it will be my duty hereafter to say, in treating of particular diseases.

Enough, however, has escaped me, to show the consideration which is attached to it, and how indispensable it is, in all our pathological investigations, to keep the prepotency of this organ steadily before us. Never, or very rarely, at least am I called to a disease, acute or chronic, that I do not ask myself, what concern has the stomach with the case?

Numerous, however, as are the affections, of which it is the immediate seat, it seems to me equally certain, that not a few instances of disease hitherto referred to it, are really lesions of the great centre of the ganglionic system of nerves situated behind it, and on which the actions of organic life so materially depend. This view I shall hereafter have occasion to exemplify, in treating of certain affections which have been generally considered as strictly of gastric origin and nature.

The first subject presenting itself for examination is,

GASTRITIS, OR INFLAMMATION OF THE STOMACH.

The phlogosed states of this organ are various. Looking at the several tissues of which it is composed, and the infinity of causes operating on it, from its situation and multiplied connections, such modifications are to be presumed. To point out these in detail were an endless undertaking, and, even if it could be conveniently accomplished, would prove of little practical advantage.

Exposed to whatever of an irritating nature may be introduced into the stomach, its mucous surface generally becomes the primary and principal seat of the phlogosis, and to this I mean chiefly to confine my remarks. Commencing, however, in that coat, it occasionally involves the cellular, muscular, and peritoneal coverings, or, reversely, originating in the exterior tunic, the irritation may be extended inwardly, and, in either way, we have a case compounded of these states.

It is hence to be inferred, that to give a just exhibition of the symptoms of gastritis, in the comprehensive sense of the term, is no easy task, and utterly impossible within any narrow limits. Till very recently in the histories of it, no regard was paid to the distinction of tissues, and, being derived from the contemplation

of the effects of poisons only, were, of course, exceedingly defective. The phenomena of such matters alone are infinitely diversified, and will be found in the old toxicological treatises to be rather grouped together, than separately or individually portrayed. These, though of late, very minutely discriminated, I shall not now notice, as they may be more appropriately disposed of under the head of poisons. We are aware of the susceptibility of the stomach to inflammation from various other agencies, and that, too, there is scarcely a phlegmasia, however remote in its seat from that viscus, or in whatever mode induced, which does not bring it into participation.

Gastritis differs further in its symptoms, as it may be simply a phlogosis of the stomach, or a fever, a local affection, or with constitutional disturbance, and scarcely less so, as these states may vary in intensity. There is in this respect the widest difference, all the intermediate states occurring from a mere *malaise* or a sort of indescribable wretchedness, lingering and harassing, to the extremest suffering, by which life is terminated very speedily. The general or febrile condition, very frequently an attendant, is either inflammatory or typhoid originally, or becomes so, and may be even malignant, by which the phenomena are further modified, and, lastly, it is singularly liable to anomalies and extraneous complications. Despairing of doing justice to the subject in a mere sketch, I shall aim only at a little more precision than has hitherto been observed, and particularly as regards the separation of the phenomena of the local from the general affection.

Gastritis, except when caused by certain virulent substances, on which occasions scarcely any reaction taking place, the system escapes from an implication, is ordinarily introduced by anorexia, though the appetite is sometimes temporarily increased, and by a sense of distension, load and oppression of the stomach, clammy mouth, white or yellowish furred tongue, thirst, and urgent desire for cold acidulated drinks, lassitude and restlessness, attended occasionally by yawning and pandiculation, pains in the back and lower extremities, preceded, or rather followed, nearly always by chilliness. The last symptom, indeed, is among the most constant. The catarrk having formed, the circulation becomes slow and tolerably full, or the reverse, quick, and very diminutive and feeble, according to the degree of reaction, and the tissue affected.

Gastric pain prevails, usually burning, though sometimes lancing or spasmodic, with soreness on pressure of the epigastrium, which latter, however, is not uniform. Cases, on the contrary, are of frequent occurrence where this tenderness is wanting, and the pain is referred, in some instances, to the region of the liver or spleen, or even to the chest. Deep sighing attends, with great irritability of the stomach, nausea and vomitings, especially when any thing is swallowed, sometimes of bile, though more usually of a glairy fluid, brought up rather by retchings than vomitings, with cardialgic sensations. Dysphagia is an occasional event, and, also, a sensation similar to the globus hystericus, or as if a round body was rising up, and compressing the lower part of the chest, relieved temporarily by puking. Constipation or diarrhœa now and then exists, and extreme anxiety, jactitation, and distress constantly so.

Continuing in this way for a short period, an increased prostration of power ensues, and the pulse is small and contracted, or weak and irritated only, the skin warm and dry, or cold and damp, with the tongue soft, flaccid, white, or milky, or loaded in the centre and at the root, with brownish fur, while it is clean and florid at the point and edges, or the whole epithelion is removed, as if by a scald. The brain, in some instances, is much affected, as indicated by delirium or tendency to it, and by a considerable alteration of countenance, having the expression either of fierceness or dulness, with the eyes injected.

To this state, speedily succeeds still further aggravation of these symptoms, and particularly of muscular weakness. Disposition to syncope is now common;—the pulse is nearly imperceptible;—the extremities cold;—the whole surface pale, flaccid, and dewy;—the countenance lank, singularly haggard, or even ghastly, or bloated, and may be of a leaden or bronze aspect, with confusion of the senses and mental faculties, or low muttering delirium, and nervous tremors, subsultus tendinum, or convulsions:—the epigastric and lower abdominal regions so distended as to amount to meteorism, with hiccup, and occasionally discharges, by a sort of spasmodic effort of the stomach, or diaphragm, of dark flocculose or granulated matter, or of blood, pure or little altered;—the tongue being red, dry, and polished throughout, or heavily incrustated, with the lips, gums, and teeth coated by thick tenacious sordes.

This is the tenor of the disease when highly exasperated,—the latter symptoms seldom occurring excepting in the febrile form of it. As previously intimated, however, great are the diversities in this respect, as well in kind as degree, from extreme mildness and simplicity to the utmost violence and complexity. It sometimes happens that, among the secondary or adventitious affections, in addition to those of the brain and spinal marrow just noticed, the hepatic and pulmonary organs become implicated, and may be to such an extent as completely to mask the original disease.

From the wide spread associations of the stomach, there is scarcely, indeed, any portion of the system that may not be engaged, and evince its sufferings. Gastritis, moreover, is sometimes nearly or entirely concealed by some anomalous affection, arising from an illusive sympathy as it is called. Thus it has been most prominently indicated by pain in the ball of the great toe, or in the groin, or in the pudendum, as witnessed by myself. Not a few of the cases of yellow fever, where the stomach was intensely phlogosed, were marked by scarcely any other symptom. Examples too, are reported of its chiefly appearing as rigidity of the muscles of the arm, or of more general tetanus, or palsy, or hydrophobia, or, at least, with aversion to water, difficulty of deglutition, extreme nervous sensibility, intolerance of light, or noises, &c.

In the *Edinburgh Medical Essays* a case of gastritis is recorded by Innes, the author of the work on the muscles, in which every symptom of hydrophobia was present, and, in yellow fever, the same condition was frequently observed.

Nor is it less true, that the disease may prevail in the utmost degree, without any manifestation whatever of its existence. This has been claimed as an original discovery in our pestilential fevers. De Haen and Stoll, I find, however, give examples of even gangrene of the stomach, where there was not the slightest evidence of gastric affection. The former, that is De Haen, considered it as a question of such perplexity, that he places it with a view to the exercise of ingenuity in his chapter "*De Pro-blemata et Difficultates*." Nor was the fact unknown to Cullen, who says "that it appears, from dissection, the stomach has often been affected with inflammation, when neither pain nor

pyrexia had before given any notice of it." Frank, of Vienna, has more recently made the same remark.

In assigning the causes of gastritis, I scarcely know what to omit, so variously is it produced. Most frequently, perhaps, is it to be directly traced to the poisons, strictly so called, which, however, as previously intimated, I shall, at present, exclude from consideration. Yet there are other deleterious matters that prove a prolific source of it, as acrid, crude or stimulating, or too abundant alimentary ingesta, solids or fluids, or offensive, irritating, vitiated secretions in the cavity of the stomach. It may be also brought on by the variations or excesses of temperature, by miasmata, or other effluvia of different kinds, particularly from animal decomposition, and by all those circumstances, in short, to which gastric fevers are referred. On other occasion, it follows mechanical injuries, as blows or falls, and may be induced by eruptions, acute or chronic, not coming out, or being repelled,—or by misplaced or retrocedent gout or rheumatism. Moreover, it is not unfrequently excited by rage, horror, grief, anxiety, vexation, or other moral influences of a perturbing or depressing nature. Besides which, as before mentioned, from the multitudinous relations of the stomach, it is peculiarly liable to sympathetic or secondary affections of this nature.

To distinguish the one variety of gastritis from the others is not very easily accomplished. As a general guide, we may advert to the characteristics of the inflammatory process as modified by the tissue in which it is seated. Existing in the mucous or cellular coats, the pulse is soft, the pain dull, or perhaps it may be only a sense of heat or burning;—the tongue slightly furred and clammy, or thickly coated in the centre with florid tip and edges, and the brain more or less affected: in the muscular, spasm predominates, and the pulse is small, corded, and accelerated;—the tongue being covered with white fur,—while in the peritoneal, with nearly the same states of the pulse and tongue, it is chiefly distinguishable by sharp, lancinating, diffusive pain, and ultimately by abdominal distension.

But though, for the most part sufficiently characteristic, these signs cannot be uniformly trusted, they receiving modifications from the nature of the cause, the degree of intensity of the phlogosis, the extent of complication, and other circumstances.

Gastritis when well developed, can readily, for the most part,

be discriminated from other diseases. The signs, however, hitherto considered as most characteristic of it, nausea and vomiting, a sense of heat or burning in the viscus, with intense thirst, tenderness of the epigastrium on pressure, and a florid tongue, are equivocal or fallacious, and the latter two especially. Examples of actual phlogosis occur, in which no tenderness can be detected,—this oftener, though not always, happening, where there is extreme obesity,—the stomach being so protected by a cushion of adipose matter over it, that the effects of pressure, or even punching, do not reach it. Conversely, such is the sensibility of some attenuated persons, that they will flinch, and complain of pain in a perfectly healthy condition of the organ. Not tediously to extend this critical analysis to all the signs enumerated, I have to remark in relation to the tongue, that some of the highest of the French authorities seem to attach scarcely any importance to its indications. By Andral we are told, that no constant relation can be established between its appearances and the states of the stomach—that the one is often entirely natural when the other is greatly diseased, and contrarily, it may manifest every aberration in the soundest ventricular condition. No doubt such is the fact, having seen proof of it, and especially in relation to a scalded like appearance of the tongue. But here it may be remarked, that this appearance is uniformly preceded by much gastric distress, nausea or vomiting, with a sense of burning heat in the stomach, all which is relieved on the occurrence of the affection of the tongue,—and hence, it may be inferred that the phenomenon is owing to metastasis of the irritation of the one to the other organ. Nor is it improbable that this explanation is of more general application in cases of the kind. Certainly I have seen gastric disturbances of every variety, where mitigation, or entire relief was afforded from the assumption of the primary irritation by the tongue, the mouth, the throat, or even the face. These parts, on such occasions, perform the office which is more commonly done by the general tegumentary tissue, in the form of a wide spread eruption. Louis, however, affirms that whatever may be the state of the tongue, it has no concern with the disorders of the stomach, it exhibiting the same appearance in the most opposite conditions of the viscus, in the healthy and depraved,—and indeed declares, that in those instances where the “mucous membrane presented the greatest suf-

ferings, the tongue was unaffected." Granting this fact, which is not improbable, the explanation of it is to be sought in the circumstance of the continued concentration of the irritation in the stomach, no part of it having escaped to the tongue. The preceding conclusions were chiefly derived from the examination of gastric fever. But Piorry asserts, that "in numerous instances of pure gastritis, the tongue continues pale." While I admit, generally, that the indications of the tongue have heretofore been too implicitly relied upon as criteria of gastric disturbance, I am not prepared to go to the extent of coinciding in the decision of the writers whom I have cited. This seems to me precipitate and indiscriminate, partaking largely of the character of ultraism which belongs to the school of Paris.

The most common aspect of the tongue, in the beginning of acute gastritis, whether it be local or in connection with fever, is, according to my own observations, that of milkiness of tint, and, in the advanced stage, should the case become typhoid, of an encrustation of dark sordes. Floridness seldom occurs in acute attacks, except they be induced by acrid or corrosive poisons. But in chronic phlogosis of the stomach, if of severity and lengthened duration, it is very commonly to be seen, and sometimes the tongue acuminate with retorted edges. Nevertheless, as stated by the French writers, it is undoubtedly true, that the tongue sometimes remains totally unaltered in the most exasperated gastritis. Especially does it happen in yellow fever, of which I have known hundreds of instances, and was always a symptom of evil import, so much so, that it became a saying that "with a natural tongue, death was inevitable in that disease." On the whole,—of the signs of acute gastritis, the least uncertain, in my opinion, are deep sighing, extreme jactitation and restlessness, tossing of the arms, stripping the breast naked, rolling or tossing about the bed, retchings, not vomitings of glairy matter, or black vomit,—wild injected eyes, and a tendency to, or actual delirium.

The disease most closely resembling gastritis, is phlogosis of the small intestines, particularly of the duodenum. But here, in a practical view, we need scarcely encounter the trouble of an investigation to determine the point. They, indeed, usually co-exist, and whether separate or united, essentially the same management is to be pursued. More easy is the discrimination from

hepatitis, and the means of doing it will hereafter be given. Not a little difficult, however, is it as to cerebral phlogosis, whether the one or the other be primary or secondary;—for such is the intimate consent between the brain and the stomach, that they are singularly prone to reciprocate their distresses, and as influencing the treatment, it is important to establish the diagnosis. Much may be learnt from a careful inquiry into the history of the case, its mode of production,—the early appearances,—its progressive development, and the actual condition. Beginning with chilliness, followed by unequivocal gastric disturbance, and this maintained throughout with, at the time, tenderness of the epigastrium,—the peculiarities of the tongue already noticed,—sighing and extreme inquietude, or a tossing impatient sort of restlessness, we may pretty safely infer, that the stomach is mainly and primarily concerned. Being sympathetically disordered, it commonly, or perhaps invariably, exhibits less force in these symptoms, and the aspect altogether is more that of irritation than positive phlogosis.

The grounds of a favourable prediction in gastritis, are derived from an improved pulse, warm moist surface, cessation of gastric irritation, cleaning of the root and middle of the tongue, abatement of the floridness of its edges where such has prevailed, eruptions about the mouth or more generally diffused,—subsidence of cerebral and nervous affections, and restoration of general tranquillity. But the reverse or an adverse issue may be supposed to take place where the tongue remains clean, the abdomen is distended,—cold skin,—feeble circulation,—collapsed or bloated countenance,—deep sighing,—singultus, and, above all, discharges of dark matter upwards or by the bowels.

It being of great importance in several views to determine the anatomical characters of gastritis, let us, as a prerequisite, ascertain the healthy appearances of the stomach, and particularly of the mucous membrane. This is usually of a dull or dingy white, or slightly rosy colour, with a velvet-like surface, covered by a small quantity of mucus, slightly adherent. It is rather thicker towards the great extremity or fundus, and at the small curvature, and presents in approaching to, and especially at the pylorus, a thickness not found in any part of the digestive tube. Before its arrival at this point, it forms irregular wrinkles, very prominent when the stomach is folded upon itself."

Externally viewed, the stomach; on dissection, is sometimes found distended, or irregularly contracted. The latter circum-

stance, however, is not conclusive of inflammation, as we sometimes find the pyloric portion especially, reduced by contraction, to the size of a small intestine, when apparently in a healthy state.* Generally, perhaps, in other respects natural, it may be phlogosed, even to the exudation of lymph. On opening the stomach, we shall perceive its surface covered by a glairy, limpid matter, like the white of an egg, or more thick and glutinous, interspersed with coagulated lymph, which renders it so tenacious as in some instances to resemble a false membrane. On other occasions it is nearly serous, or it may contain blood either thin or grumous, or variously altered, even to the condition of what is called *black vomit*. These effusions being scraped off, the mucous coat is brought distinctly into view, which exhibits sometimes, though rarely, a diffused redness of several hues, from that of a deep vermilion to a greenish or purplish or brownish lividness, particularly conspicuous at the cardiac and pyloric orifices. This brownish tint, denoting the most intense phlogosis, is suddenly induced, especially by the corrosive and other poisons, and announces the commencement of disorganization.—Much more frequently, however, does it happen, that the redness follows the course of the turgid vessels, and is arborescent or streaked, or the surface is stellated, or patched, either florid or of a dark ecchymosed aspect, proceeding from infiltration of blood into the substance of the membrane itself, at which points it is thickened or swollen and softer. Dispersed over the surface pimply or pustular-like appearances are observable, owing to the phlogosis of the cryptæ or mucous follicles, which in some instances, though rarely in acute gastritis, are ulcerous. Gangrene is scarcely ever met with, and as seldom erosions, except where acrid poisons have been taken. It is then very common, should life be protracted for two or three days, though it may take place very promptly. More common than these appearances, is softening of texture to some extent, or, as has been noticed, rather firmer than natural. These are the phenomena in the mucous tissue. The other coats are not so usually affected, with the exception of the sub-mucous cellular texture, which is often highly injected. But the muscular tissue is occasionally softened, or simply florid, or contracted from spasmodic irritation only, and the peritoneal covering, with the appearances already noticed externally, has

* Andral.

sometimes its texture so fragile as to be readily lacerated. In some few cases, the whole of the membranes are reduced to a sort of pultaceous mass or *bouillie*, the parietes yielding to the slightest traction, and are readily mashed by rubbing between the fingers.* This softening of the coat particularly, may be very quickly induced, having been found in this state in fifteen minutes in a dog to which corrosive sublimate had been given.†

As to the appearances in those affections, by which gastritis is complicated, I have to remark that in some of the most violent of them, no lesions whatever are to be detected on dissection. This was often exemplified in our yellow fever, and cases are reported by Andral of very severe delirium, and tetanus, where neither the brain nor spinal marrow exhibited any injury. The same has been noticed as to the lungs and other organs, which had apparently suffered greatly. Yet sometimes it is the reverse, and especially when the consequent affection became decidedly predominant, it here having assumed so large a part of the disease that such derangements as might be supposed are found, and the stomach very often correspondently betraying a mitigation of, or entire exemption from injury. The primary is, under such circumstances, cured at the expense of the organ secondarily affected.

Conversely it is shown, by a series of examinations, that the stomach is peculiarly liable to certain appearances of phlogosis in cases, where it could not possibly have been in this condition. The fact seems not to have been unknown to Boerhaave and Morgagni, as regards at least, those who die asphyxiated, and of which we have now, an absolute demonstration from the carefully conducted experiments or observations of Andral, Billard, &c. But attention was more immediately directed to the subject, some years ago, by Yelloly, of London, in consequence of a report, that he found very generally in instances of sudden death, where no possibility of previous disease could have existed, the stomach was very apt to exhibit its vessels in a state of great turgescency, either florid or dark-coloured, and sometimes with the wide spread suffusion of inflammation, and some extravasation of lymph. These observations were first made on malefactors, soon after execution, and subsequently on persons drowned, or

* Andral.

† Brodie.

quickly killed in any way.* In a man who hung himself in this city, the stomach presented the same phenomena, though in one drowned, there were no such appearances. These latter dissections were conducted by the late Dr. Lawrence, one of the demonstrators of anatomy to our school.

It is further to be remarked, that under some other circumstances, the stomach presents similar aspects. Experiment[†] seemingly made with accuracy, demonstrate, that animals bled to death, uniformly have the mucous coat of this organ, as well as other tissues, in this state of turgescency, and from what I have seen on various occasions, I am inclined to suspect, that it is of more frequent occurrence than has been supposed, especially in exsanguineous, and other enfeebled conditions. The serous capillaries here, as in passive hæmorrhage, lose their vital properties, or what Bichat terms the contractility of texture, by which they are rendered incapable of resisting the intromission of red blood, and passive congestion, of a florid or livid appearance ensues. Moreover, it is quite true, that certain lesions of other organs, by the prevention of the ready return of the blood from the stomach to the cavities of the right side of the heart, are productive of a similar effect. Nor is it less determined, that these appearances, are sometimes the result of the act of dissolution itself, or occur subsequently, by the gravitation of blood, or its transudation through the vessels into the membranous textures, or by the imbibition of extravasated blood.

In several views it is important to be able to distinguish the counterfeit from the real characteristics of inflammation, and which is especially so as relates to questions of medical jurisprudence. Called into courts of justice to give evidence involving the life of an individual, on a charge of poisoning, the facts I have disclosed should induce the utmost care and circumspection. Let it always be recollected that the stomach may simulate inflammation whenever death suddenly takes place as well as under other circumstances.

Notwithstanding the regard which the subject has attracted, we are still not sufficiently informed to enable us, perhaps, to establish uniformly a precise diagnosis. This is acknowledged by the best authorities, even those the most conversant with

* Med. Chir. Trans. vol. iv. pp. 380, 387.

† Seeds and Kellie.

autopsic inspections. It may be, however, generally stated, that in actual phlogosis, in place of diffusive redness, which occurs so rarely that it has been even denied altogether as a test of inflammation, being rather the result of imbibition, it is in streaks or arborescent, and especially dotted, either very florid or of a slate or brownish colour. This last, or the stellated appearance, is, indeed, held as the pathognomonic sign of common gastritis, and when attended by thickening of texture at certain points, with extravasations of thick tenacious mucus or lymph, may be deemed nearly conclusive of the fact. Excited, however, by acrid poisons particularly, though where the phlogosis is very intense the same effects may be otherwise induced, erosions or softenings are additionally met with: while, on the contrary, in the pseudo cases, we have ordinarily the wide-spread floridness, or patches of livid ecchymosis, or little more than turgid vessels, florid or dark, without effusions, except sometimes that of blood, and these phenomena unaccompanied by any material alteration of structure. Even erosions and softenings, however, are not too hastily to be assumed as tests of inflammation. We are now fully aware that such changes, to the complete perforation or destruction of the stomach, in one or more parts, may proceed from its own solvent fluids, independently of any co-operation of disease. From the previously well ascertained properties of these fluids, this, which might have been presumed, is now indisputably settled by the observations or experiments of Hunter, Spallanzani, Burns, Carlisle, Cooper, Adams, Wilson Philip, Bretonneau, Trousseau, Taylor, &c., on the human subject, or brute animals and fishes.

Concerning simulative inflammation of the stomach, some other circumstances are worthy of notice. If the colouration arises from congestion simply, it is mostly of a darkish hue, the vessels greatly distended, with sometimes ecchymosis, or petechiæ or vibices, or there is an extravasation of black blood, grumous, or more or less dissolved or otherwise changed. When owing to imbibition, it is merely a stain, to be removed by washing or maceration. Caused by gravitation or settling of the blood, it will be seen in the most dependent parts only. Despite, however, of the foregoing or other criteria, it must be confessed that it is extremely difficult, and perhaps impossible, satisfactorily to discriminate inflammation from analogous states at all times.

In the progress of this discussion, so much has already been

said of the peculiarities of gastritis, and its leading phenomena so amply expounded, that its pathology might possibly be understood without any further elucidation. There are, however, several points which are still left in some obscurity. 1st. What is the explanation of the fact now admitted, that the most violent gastritis may prevail without its being betrayed by any symptoms whatever? It is probable, that, in most of such instances the stomach, having sustained a loss of its organic sensibility, it feels not its injuries, or, at least, does not manifest them—though on other occasions, the gastric lesion may be masked by the preponderancy of the affection of another organ, and above all the brain. Be this as it may, there is no peculiarity in the occurrence, every other viscus of the body, the lungs, the liver, the spleen, the kidney, the brain, &c., sometimes disguising the severest of even its structural derangements, in the same way.

2. To account for the phenomenon, that not the slightest inflammation can be detected in the stomach, when every assurance by symptoms had been given of the existence of gastritis, has proved equally perplexing. Different explanations does it admit. It may be ascribed to the retraction of the blood from the capillaries, by the act of death, as happens in the skin, when inflamed by the exanthemata—and also, in the serous tissues, the peritoneum or pleura, of which some striking examples are recorded—or it may be referred to the emptying of the vessels by the copiousness of the effusions. Confirmed in some degree, is the latter hypothesis by the consideration, that in the pestilence to which I have alluded, whenever an excessive excretion of black vomit took place, no phlogosis or congestion was observable. To more common cases of gastritis, there are equally incident sanguineous, serous, and other exhalations, which may be productive of a similar effect. Nor is it improbable, that it sometimes is owing to such an overwhelming impression from the operation of the cause, as to prevent inflammatory action, though otherwise, the organ may fatally suffer, as in the case of prussic acid, &c., or to the disease of the stomach having entirely ceased by a translation of it to some other part.

3. As to the circumstance of the stomach exhibiting the appearances of phlogosis, when it could not possibly prevail, the explication is more easy.

In most cases of sudden death, and particularly in those I have

referred to, it appears sufficiently, that it is occasioned by asphyxia, which state we know, independently of the direct evidence of Bichat, from actual inspection, produces fulness of the capillaries. Why this happens oftener and more prominently in the stomach, as is represented, probably proceeds from its being the *ultimum moriens*. Haller states that vitality is sensibly retained in it, and the small intestines, when extinct in every other part. Conclusively, however, the late experimentalists have observed, that in opening living animals, for the purpose of physiological investigations, they uniformly perceived the stomach to become a centre of fluxion—its vessels filled, and its surface reddened, or darkened, exactly in proportion to their struggles. No structure, indeed, is so prone to assume these appearances as the alimentary canal. During chymification, the stomach has been proved to be red, or turgescient, from an augmented flow of blood to it—the same condition is presented by the duodenum, when it is engaged in the digestive process, and by those portions of the large bowels, where faecal matters accumulate and for a time are detained. The distinction between gastritis and gastric fever, consists mainly in the one being local, and the other so wide a sympathetic extension of the irritation, as to embrace and disorder more or less of the system, and especially the capillaries, which last is the essence of genuine fever. It is a fact too interesting not to be pressed on attention, that the tendency to diffusion, in this case, is in the inverse ratio of the intensity of the primary phlogosis.

Entering on the cure of gastritis, it may be proper to state, that I shall have regard only to the affection excited by the more ordinary causes, such as requires no antidotal or counter agency for its relief:—the latter instances appertaining to the specific poisons will be disposed of in another place.

First and mainly of the active form of the disease. The principle on which the management of the case I have now in view should be conducted is obvious, and the means are few and simple. It is an inflammation of rapid progress, in a delicate organ, and hence we are to apply, without delay, our most efficient remedies. No one will dispute the propriety of venesection. Disregarding the state of the pulse, or general prostration of power unless it amounts to absolute collapse, we must deplete freely or sacrifice life. This precept applies to the early stage of the case, and when induced by the common causes. Excited by

certain depressing or poisonous agents, or, where it is advanced, venesection should be more cautiously adopted. The distinction is important. Being persuaded, however, that phlogosis really exists, though from its *suffocated state* not manifested by the usual signs, the practice must be bold and decisive. Twenty ounces of blood may be taken at once, provided there is considerable reaction, and the operation will probably be required to be repeated several times to a greater or less extent in the more inveterate attacks, and especially when the muscular and serous tissues are also involved. As we deplete, the powers of vitality are developed, and, consequently, the case assumes a more open and manageable shape. Cullen speaks confidently to this point, and the propriety of the practice is supported by general authority.

Next in importance is topical bleeding by leeches or cups. It is not easy, indeed, to appreciate their utility at this period without an absolute experience of it. Depletion in this way is sometimes also required to be repeated several times. Cold application to the region of the stomach may be serviceable, as alleged by some—though, in other and more frequent instances, warm fomentations answer better. These are to be succeeded by a blister. And thus it is we subdue inflammation, and quiet the irritability of the organ.

As to medicine at this stage, it were well, as a general rule, to abstain altogether from its use. For the most part, it serves only to exasperate irritation, and frustrate the great purposes in view. Let the stomach itself be as much as possible at rest, and, where the remedies mentioned do not restore it to tranquillity, the warm bath and anodyne enemata may be employed. No small advantage, too, will be gained by stimulating the lower extremities by sinapisms, and even warmth to them in any mode procured is not devoid of effect. Medicine being ventured on at all, it should be some one of those mild articles calculated to allay gastric irritability. An apprehension of offending the stomach, induces a forbearance of purgatives. Evacuations, however, may be had by injections, and when the intensity of the phlogosis is overcome, then laxatives can safely be directed.

It ought, however, to be mentioned here, that from experiments made with calomel, it appears, that in considerable doses, it has a tendency uniformly to allay irritability and inflammation of the

stomach and duodenum, and that its action on the lower bowels is directly the reverse, or to irritate and inflame them. If these conclusions should turn out to be correct, they will open some new views as to the use of that article, especially in gastritis. But I confess, that I want confidence in the statements. They afford one of the numerous illustrations of the contradictory character of recent observations, and even experiments, that, while by one set of writers, we are told of the sedative effects of calomel, in this application of it in an infinitesimally minute amount, it is as positively denied by another, who maintain as decidedly the contrary, or that such effects are only attainable from it in large quantities.

In these cases it has been recommended to pour down very freely the demulcent beverages. Except in the instance of acrid poisons, from which analogy the practice was borrowed, no advice could hardly be more pernicious in the early stage of common gastritis. They annoy the stomach, and keep up vomiting. Better is it to allow drink moderately. Thirst is more effectually thereby allayed, and the stomach remains undisturbed.

Toast water, barley or gum water acidulated, or lemon or orangeade are more appropriate. Cold water rendered more so even by ice, or small pieces of ice itself, held in the mouth, or slowly swallowed, however, answer better, and are highly relished.

As the disease advances, and the signs of sinking supervene, or earlier, where the case presents primarily a very congestive or typhoid state, another description of remedies is demanded. Commencing with the milder stimuli, our chief reliance will soon have to be reposed on the carbonate of ammonia, or the spirit of turpentine, aided by the ordinary external stimulating applications. Turpentine seems to be equally adapted to this condition of the case, whether it be seated in the mucous or serous tissue. It in a very extraordinary degree controls the reduced states of inflammatory action, as well as relieves the congestive states of the former membrane, and we learn that it has manifested an equal effect over those of the latter, as in peritonitis. But though prescribed by some, even in the height of an inflammatory attack, this is a practice I would not imitate, and, indeed, must condemn. It is at the period where the activity of the phlogosis ceases, and vital energy seems to be very languid, that it becomes proper, and then it is among the most valuable of our remedies. When

muscular inflammation is mixed up with the case before us, the principal difference in the management regards the use of opium, alone or combined with calomel and ipecacuanha, to reduce spasm and allay pain as well as to overcome the phlogistic irritation.

This is the treatment of simple gastritis. Complicated, however, as it may be by the engagement of other structures, even to the assumption of the character of well marked fever, I need scarcely say that, under such circumstances, the mode of cure is correspondently changed, so as to be accommodated to the varied condition. But to consider the subject in this light here, would be out of place. I shall, therefore, only remark, that the general or constitutional disturbance is mostly the mere effect of the topical lesion, and that, while directing attention to the relief of the former, we are never to be diverted from the latter, as the source whence the secondary mischief proceeds.

Gastritis is laid down by several of the late authorities on the subject as a very rare disease. Thus Abercrombie declares, "that as an idiopathic affection, except from poison, it is very seldom to be met with, and scarcely less so, when organs most nearly connected with the stomach have been disordered in the highest degree." Nearly the same language is held by Louis, Andral, Bouillaud, &c. But I have reason to believe that this is a mistake. Exposed as the stomach is directly, and through the medium of its infinite sympathies with every part of the body, it is peculiarly liable to morbid influences, and can scarcely escape from frequent inflammations. Examinations by others equally entitled to an opinion, abundantly confirm the conjecture, and I may add that I have rarely opened a case of any of our regular fevers, the autumnal especially, that appearances of the kind were not exhibited. From the uniformity of the occurrence, it was indeed, that many of the French pathologists were led to suppose, that fevers are really dependent on gastro-enteric inflammation, in conformity with views previously entertained and taught by myself.

My allusion is particularly to Broussais and his followers. But such is the whimsical changeability of the disciples of the present school of Paris, that no doctrine endures. Every thing coming from it proves a fleeting emanation, vanishing before it can be cleverly embraced. But a few years ago, nearly all the cultivators of morbid anatomy there, here, and everywhere else, united in the opinion of the inseparable connection of *gastro-enterique*,

with the febrile, as well as almost every other disease, and this as the result of the most careful and multiplied autopsies. Now these very same personages, or many of them at least, utterly regardless of former declarations, do aver that gastro-duodenitis is a very anomalous event, and that the lesions commonly to be met with are follicular only, of the ileum and lower intestines, constituting the origin and maintenance of the fever, &c. As it is difficult to treat such inconsistency and solemn trifling with any deference or respect, I shall only observe, that by their own showing they were at the one, or other time most egregiously wrong, and that before they can hope to be trusted, better proof must be afforded than heretofore, of the skill of their investigations, or the veracity of their reports. Deplorable indeed, is the uncertainty of medical testimony, and that from post-mortem examinations, seems quite as much so as from other sources. Characterized by similar contradictions, it is even more dogmatically delivered. Let it be remembered, that except the difference of moral turpitude, error is the same however generated or diffused. It matters not whether we are deceived by deliberate falsehood, or have imposed on us crude and precipitate conclusions, as substantial truths.

CHRONIC GASTRITIS.

As this affection is usually presented, epigastric uneasiness is first complained of, which is a sort of tightness extending across, from one side to the other, down to the hypochondriac regions, particularly the right one. This uneasiness may be continued or intermittent, though it is always revived, and becomes aggravated by eating heavy indigestible articles of food, and perhaps, still more, by stimulating drinks. The pain in the stomach itself, is mostly circumscribed to a spot, and which may be acute, or merely a dull ache. There is also, occasionally, a sensation compared to the pressure of a ball against the diaphragm, and in other instances, as if a bar were fixed across the stomach, preventive of the passage of every thing into it. The tongue at this time is slightly furred, and the appetite capricious. Mostly an aversion to food prevails—sometimes, however, otherwise, it being eagerly desired. Cold drinks are very grateful, and as it

were, instinctively taken. Digestion is not well performed, and the bowels are torpid, though sometimes otherwise. Great inquietude exists, both of body and mind, expressed by some indefinite phrase of wretchedness. The sleep is broken and disturbed by morbid vigilance or unpleasant dreams. Even at this early stage, there may be, though not usually, a diminutive, hectic, irritative febrile movement, denoted by alternate chilliness and flushes, quick pulse, dry skin, heat in the palms of the hands and soles of the feet, with diminished or vitiated secretions.

Evidence of topical phlogosis, progressively becomes more unequivocally developed, by an exasperation of the preceding affections. Complaints are made of pungent, burning pain in the stomach;—there is tenderness of the epigastrium on pressure, in some instances exquisitely so, while in others, it is scarcely sensible, attended occasionally, by a feeling of constriction of the throat, difficulty of deglutition, short breathing, and dry cough. The tongue is now heavily covered in the centre and root, having its edges and tip florid, and polished, the former retorted, and the latter acuminate. Yet it may be clean throughout, moist and red, resembling raw flesh, or a dissected muscle, with its papillæ elongated. Cases too, occur, where it is merely dotted by red specks, or covered with a dry coat of mucus, especially at the root. But though some of these appearances are generally present, I have seen the tongue remain throughout in some severe and protracted attacks, very slightly or not at all changed. Digestion ultimately becomes exceedingly depraved, every meal producing painful oppression, accompanied by flatulence, or sour or fœtid eructations, the thirst often intense, craving the indulgence of cold water, or acidulated drinks;—and vomiting invariably takes place, from offensive irritating ingesta which are thrown up alone, slightly mixed with glairy mucus, though occasionally, hæmatemesis occurs, and the discharge of blood is sometimes very copious.

Constipation becomes the confirmed habit of body, now and then, however, interrupted by diarrhœa, the stools indicating, for the most part, an absence of healthy biliary secretion, and the urine variously vitiated. More continued, as well as higher is vascular excitement, the pulse being pretty constantly quick, firm, and corded, and towards evening, a distinct paroxysm of fever is manifested. There may be sometimes great irregularity in the

circulation by intermittence of the pulse, or other modes, and by palpitations, or a sort of throbbing, commencing apparently in the epigastrium, and extending to the heart.

The case in this way marches on, till it leads to a most deplorable condition of things. Contemplated at its height, the general aspect betrays those changes which are wrought by the ravages of inveterate disease. Extreme emaciation exists;—there is great loss of muscular strength;—the skin sallow, or dingy, and husky, adhering as it were to the bones;—the countenance altered by haggardness;—the eyes sunken and turbid, and the mind, which throughout had been feeble and dejected, or petulant and morose, may now be depressed into imbecility or harassed by all sorts of afflicting hallucinations, or errors of the imagination. Every supply of sustenance being cut off by vomiting or suspension of the nutritive processes, the powers of life rapidly waste, till absolute exhaustion finally closes existence.

Such is the graver character of the disease. But it is varied, as well in relation to the force, as kind of symptoms. Numerous cases of it are infinitely milder, while on the contrary, it may be even more distressing than I have described it, when it assumes the state of ramollescence, or of common ulceration, scirrhusity or open cancer, hereafter to be noticed. The disease, too, sometimes branches out and through the connections of the stomach, involving many other structures; so deeply, indeed, as very seriously to complicate it, or entirely merge it in themselves. These, however, are forms of it, which will claim more of attention under other heads. For the present, it must suffice to state, that I have often seen chronic hepatitis thus induced,—more than once inveterate pancreatitis,—that according to my observations, the kidneys are very apt to be affected, and still more, the whole nervous system. Exceedingly common, indeed, is spinal irritation in its several varieties, even to paralysis of the lower extremities, and not less so are the sufferings of the brain. Excruciating headache is very frequent, sometimes attended by disorder of vision, or even total blindness,—hydrocephalus is a further incident,—and I have known two instances of confirmed mania—though, as previously intimated, depression of spirits, amounting occasionally to hypochondriaism, or gloomy melancholy, is more constantly displayed. Lesions of the lungs especially, have of late attracted attention. Cough, gradually becoming violent

and spasmodic, resembling pertussis, is not unusual, or the case may have more the aspect of bronchitis, or counterfeit with considerable exactness, phthisis pulmonalis, and, indeed, there are not wanting some writers who believe that the latter disease may be thus induced. From my own practice, I might give instances illustrative of all the secondary affections mentioned.

Chronic may be the sequel of acute gastritis, or an original condition, resulting from a weaker, and more gradual operation of the same causes, and is sometimes superinduced on dyspepsia, as well as some other affections of the stomach.

Clearly as it is ordinarily designated, it might be mistaken for similar states of the small or large intestines, the duodenum, or arch of the colon, especially. But here, it is comparatively of little consequence as the treatment is essentially the same. It resembles too, some of the varieties of real dyspepsia, a mere functional affection, and equally so what is called a sensitive stomach, or gastralgia, a chronic nervous irritation, from each of which, it ought to be discriminated, as it is managed differently. An attempt, however, to settle the diagnosis, must be postponed till these several diseases are reviewed, and their respective peculiarities described, without which, it were difficult, or perhaps, impossible.

Leaving, then, this part of the investigation for the present, I shall merely remark, that not so much is to be apprehended by thus confounding it, as from some of its obscurer forms entirely eluding suspicion, and that hence, care and vigilance should always be on the alert, to detect its existence. Guard, moreover, against mistaking it for those numerous secondary affections of other organs, consisting often in merely sympathetic irritation, by which it is very apt to be masked, or partially concealed, the mode of treatment in these instances, being opposite. Great mischief, for example, would ensue, were we under the supposition that the more manifest disorder of the liver, the lungs, or the brain, which so often occurs in these cases, was the essential affection, and to manage it accordingly.

Taken in the commencement, the disease is usually cured. Neglected, however, till it becomes confirmed, it proves exceedingly obstinate, and in the ultimate stage, when structural derangements take place, except palliation, little can be effected for the most part, and death sooner or later is inevitable. I have

scarcely to add any thing, as to the favourable or unfavourable signs, to my remarks under a preceding head. Of the former, I will only say that hæmatemesis, provided the blood is healthy, is often one of the most so, and the vomiting of dark, granulated matter the reverse.

Excepting the organic changes, the anatomical characters are here very similar to those in the acute affection, varied by the gradation of violence and duration of the attack. The mucous coat of the stomach has been found intensely florid,—though on other occasions exhibiting the several hues of purple or lividness, or of slate or brown, or its vessels very prominent, even appearing to be varicose, with its texture softened or hardened, thickened or thinned, in parts only or to a greater extent. Generally, however, it is softer and more attenuated at the larger extremity, and thicker elsewhere, though there are striking diversities in this respect.

What are termed vegetations, are sometimes to be observed, by which are meant a luxuriant growth from the mucous surface, somewhat resembling the papillæ of the tongue, of a red or brown colour, concave form, and extremely soft. Not often occurring in the stomach, they, however, do occasionally, and Orfila has described them as being very abundant in a case from the irritation of cantharides. We also sometimes meet with depravations of the cryptæ or mucous follicles, which are inflamed and so enlarged as to become prominent, with occasionally erosions of them, or simple ulceration of the tissues themselves, to a greater or less extent, and even scirrhus and open cancer. These are the phenomena appertaining to the stomach itself. Nearly similar ones are incident to the small intestines—and the liver or the other chylopoietic viscera may be variously disordered from the most trivial to the very worst and the most destructive lesions. The same is predicable of the lungs and the brain. But the latter do not frequently happen.

As identical, or nearly so, with that of acute gastritis, I pass over the pathology of the chronic condition, now under review, without a remark.

Much of the treatment of the disease is equally applicable to some of the varieties of dyspepsia, and deferring all details till I reach that subject, I shall now deliver a mere summary only.

The leading indication is to arrest the case, by the prompt

reduction of the phlogosis;—in the execution of which design we mainly rely on the detraction of blood. General bleeding is highly useful, where there is much vascular action and diffusive excitement, though never to be carried at any one time to a great extent. Eight or ten ounces of blood are the maximum, which may be repeated occasionally, so long as it shall be deemed necessary. Co-operating with this, a sufficient number of leeches or cups ought to be employed as frequently to the epigastrium, to draw away an equal quantity of blood. The value of local bleeding, under such circumstances, is so great, that unless there be the indications mentioned, it may be made to supersede altogether venesection. The point being attained for which depletion is required, a blister over the stomach, and from time to time renewed, or frictions with Croton oil, so as to bring out a pustular eruption, prove very efficacious in eradicating any remnant of disease. Excepting to obviate constipation, and here the mildest laxatives, as castor oil or the Epsom salts, should be selected, all medicines may be withheld. It is true that the nitrate of potash, in very small doses, with gum-arabic, has been recommended, and though perhaps serviceable, I have rarely resorted to it.

In a more advanced stage, when the inflammation is unrelenting, with the same measures of reduction and counter-irritation, minute quantities of the blue pill, in combination with ipecacuanha and opium or henbane, are eminently serviceable, as well for the purpose of soothing irritation, as by an alterative action, to subvert that of the disease, by the promotion of the secretions.

Without, however, a duly regulated regimen, all remedies must be nugatory. Let the patient be made to observe, in the first place, a state of entire rest. Every species of motion, and of excitement, is studiously to be avoided, and his diet to consist at first exclusively of the demulcent beverages, agreeably acidulated, and next of the farinaceous articles. Continue this course for a few weeks undeviatingly, and a cure, in a large majority of instances, may be anticipated. But trespasses in eating, or in any other mode, never fail to revive or exasperate the disease, and our expectations as certainly will be disappointed.

ORGANIC LESIONS OF THE STOMACH.

It is now proper to give a more distinct consideration to some of the severer organic lesions of the stomach, and among these, as claiming particular attention, are, softening of its texture, simple ulceration, scirrhusity, and open cancer. Chiefly the results of neglected inflammation, these afford solemn admonitions to a more vigilant attention than is ordinarily observed, in the early stage of the disease.

The first of this series is a most mysterious affection, in many instances. By Andral it was originally noticed, who has conferred on it the title of *ramollissement*, or softening. Though in the acute attacks it is marked by the phenomena of violent gastritis, it often, in the chronic form, steals on insensibly, in the guise of the mildest dyspepsia. "There is," says the writer whom I have mentioned, "no loss of appetite, no pain, no thirst, no disturbance of the circulation. The patient only complains that digestion is more or less uneasy and imperfect, and he loses flesh and strength. But though thus mild, it steadily advances, till hectic irritation, and its ordinary consequences, are induced, and he sinks emaciated and exhausted." How far this representation of the case is correct, I pretend not to determine. I have seen several instances of the disease, demonstrated on dissection, where the symptoms had been infinitely more violent, and one case in which they corresponded exactly with the description recited. The membrane is softened in different degrees, sometimes, though less firm than natural, still consistent;—in other instances gelatinous, resembling thick mucus, or reduced quite to a pultaceous mass, or it is partially removed, leaving the subjacent cellular tissue naked, in patches of various sizes. This sort of degeneration is more apt to occur in the stomach, than any other portion of the alimentary canal. But it does occasionally take place both in the small and large intestines;—and, in one case, I saw it to a great extent in nearly the whole.

As long as the disease remains so ambiguous, the treatment of it must necessarily be vague and unsettled;—and all we can do is to be guided by general principles. In the beginning, I should presume, those means are called for which appease irritation or subdue positive phlogosis, and in the advanced stage, the muri-

ated tincture of iron, in small doses, has been highly recommended, with little or no just claims, I am inclined to suspect, to confidence;—such changes of structure as are then proved to exist being irreparable. It is indeed absurd to suppose that the lost mucous tissue is ever replaced, though the fact is affirmed. Yet I cannot doubt, from what I have seen myself, that life may sometimes, be protracted for a length of time, with no more discomfort than ordinarily attends inveterate dyspepsia, where a very considerable portion of the mucous membrane of the stomach had been removed. I recollect particularly examining, with Dr. Meigs, a gentleman dying of another and very acute disease, whose stomach and rectum presented such denudation, in large patches, evidently of a chronic character, who, for full twenty years before, had suffered uninterruptedly from gastric derangements and their concomitants.

In treating of *ulceration* of the stomach, I have no reference to the small follicular lesions of the kind of which so much has recently been said by foreign writers. These will subsequently engage attention. For the present I confine myself to ulceration of the tissues, differing from the former very materially in character and dimensions, and which, in contra-distinction to the cancerous affection, I denominate *common ulceration*.

It sometimes happens that this comes on while the individual is apparently in good health, with so few of the symptoms of gastric disorder as to excite no solicitude. Nothing more is complained of than in ordinary dyspepsia, and this condition may be protracted with now and then some aggravation, for a great length of time. The system suffering little, there is scarcely a sensible degree of emaciation, or diminution of muscular strength, though there may be perceived a change of complexion, it usually becoming leucophlegmatic, or sallow, more of the lemon than orange hue, or dingy, or saturnine. Exactly under these circumstances, I have known several instances to linger out for years, when all of a sudden, by an attack of violent vomitings of black blood or dark flocculose, or granulated matter in immense quantities, death speedily to ensue.

Taking the case, however, in its general character, we shall find, that after it has endured for some time, symptoms do arise indicative of established organic derangement. These are pain and heat, compared to the burning of a coal, more or less perma-

nent, under the ensiform cartilage, extending in some instances to the hypochondriac, and even the lumbar region, with vomiting sooner or later after each meal, at first aqueous, mixed with undigested food, and afterwards of a brownish fluid, which usually affords temporary relief,—gradual emaciation and loss of strength, till they become extreme, and with uniformly the alterations of the colour of the skin already noticed, the whole attended by considerable hectic irritation. As regards, however, the intense heat, and burning of the stomach, I confess that I have not seen them of any great severity, and have made the statement of their existence rather on the authority of others than my own experience. Continuing with progressive exasperation, the disease at length fatally terminates by the ulcer perforating the stomach, or by the occurrence of such vomitings as have been mentioned, the amount of which is sometimes hardly to be credited. In one case which I attended with the late Professor Dewees, eight gallons were voided in three days, and in nine others that came under the care of myself, or with Drs. Physick, or Hodge, or Jackson, &c., the quantity was scarcely less.

Generally ulceration of the stomach has been deemed one of the sequelæ of chronic gastritis. Granting for the present the truth of this allegation, there are several other circumstances in the etiology of the affection which deserve to be noticed. This, however, I shall postpone till I come to the cancerous lesions of the viscus, these belonging to both conditions.

It is not so easy, as perhaps might be expected, to distinguish the present from some other gastric disorders, and especially in the early stage. Common dyspepsia resembles it, and some of its forms have really an identity of symptoms. The hæmatemesis of the advanced stage, or rather the puking of dark granulated matter, mostly very characteristic, may be deceptive. I have seen it an attendant on gastritis, and still oftener, on turgescency of the vessels of the stomach. Of its analogy to the cancerous affections, I am to speak presently.

Except in the beginning, or when the ulceration is small, the disease, I think, may be pronounced nearly incurable. Nor at this most favourable moment, do our efforts or the natural resources often succeed. For the most part, the ulcer continues to spread, generally assuming a more malignant character, though in some rare instances it acquires, or has originally, a contrary

disposition, and ultimately heals. Too many cases are recorded, with the unerring marks of cicatrices, to doubt the occasional occurrence of this event, among the most noted of which is that of the justly celebrated Beclard, who, after lingering under such an attack, recovered, and, subsequently dying of another disease, his stomach exhibited conclusive proof of the ulcer having been cured.

Commonly, on dissection, a single ulcer is discovered. Cruveilhier, who has paid great attention to the subject, says that such is almost uniformly the case. But this is denied by some of the authorities, who assert, "that they are not rarely double and even multiple." I have never known such an instance of multiplication. The ulcer, at first, is very analogous to the venereal chancre, having a hard retorted margin, is deeply excavated, and with a white or gray indurated basis, consisting of the peritoneal coat, which is thickened and more dense than natural. As it proceeds, however, it sometimes becomes phagedenic, or sloughing with ragged edges, of which I have seen several examples. It may occupy any position on the surface of the stomach, though most frequently situated in the great curvature or about the pylorus. It is of all dimensions and shapes—in the beginning not larger than a chancre, is round or oval, and has been found to have extended over half of the stomach. I have witnessed cases with Drs. Physick, Jackson, Hodge or Horner, through which the head of an infant might readily have been protruded. The figure here was irregularly circular, and with very unequal edges. By a continuance of the ravages of the ulcerative process, the whole of the tissues are sometimes removed, including the peritoneum, causing a complete perforation, through which the contents of the stomach escape into the abdominal, or, according to Willis and Van Swieten, sometimes into the thoracic cavity, each of whom noticed a communication of this kind. But against a catastrophe so immediately fatal, nature more commonly provides an adhesion with some other organ, forming a basis for the ulcer, thus closing the opening, and protracting life. Every case which I have witnessed, amounting to thirty, had this provision, the adhesion being with the liver. But it has been detected with the pancreas, the spleen, colon, &c.

In connection with these more prominent phenomena, there has been remarked, phlogosis or congestion in other portions of

the stomach, denoted by increased vascularity, general, or arborescent, or punctated redness, or an engorgement of the veins. Ruptures of the large vessels of the ulcers, from erosion, has been observed occasionally in hæmorrhagic cases. But a more common appearance is that of a number of vascular orifices sometimes so minute as scarcely to be perceived by the naked eye, through which the blood escapes.

Differing from all this, are the phenomena where recoveries have taken place by the healing of the ulcer. As the cicatrix forms, either by the generation of a fibrous tissue, or the approximation of the edges of the ulcer, it presents a different aspect. The lesion being small, it is cured in the second mode, and is ragged, striated, or puckered;—and when large, in the first, and then is smoother, with a fibrous bottom, and a margin of cellular membrane. But we learn that sometimes the adjacent parts are so drawn together, as considerably to contract and deform the stomach, reducing the capacity of its cavity, and to have impeded its functions. The cicatrix, on the whole, in whichever way induced, has the appearance of that of a burn of the exterior surface of the body.

In commenting on the pathology of this affection, I have to say, that the prevalent opinion, as previously stated, refers the ulceration to neglected or ill managed gastritis, and which, in its general application, may be just. Exceptions, however, exist, to the universality of the rule. The lesion has been frequently met with, where no indication of phlogosis had preceded its occurrence. Nor is it less true, that such a termination is not more incident to the active than the other states of gastritis. Granting the relation of the two conditions usually maintained as cause and effect, we must still seek for some peculiarity in the phlogosis to produce this event. Greatly inclined am I to suspect, that it receives a modification from some constitutional diathesis, promotive of the tendency to ulceration, and without which, it would seldom take place. It may be further stated in support of this view, that in numerous instances ulceration is observable in the delicate and cachectic, of phlegmatic temperaments, perhaps more so than in the robust and sanguine, with perfect integrity of constitution. The diathesis to which I have alluded, is unquestionably sometimes strumous, though at other times not so, and probably may be of any of the diversified descriptions comprehended

under the indefinite phrase "bad habit of body." On this account probably, it is so often associated with drunkenness and gluttony, and such like depraving indulgences. We see cancer of the same organ dependent on a specific constitutional condition, and why may not the species of ulceration now under review, require also a general contamination of another kind for its production?

In regard to the treatment of this disease, so little can be accomplished, that it will not long detain us. Nearly by common consent, a regular medical course is abandoned as offering no prospect of success, and hopes are now chiefly reposed in the powers of nature, aided by a well devised regimen. Thus, I have understood, was the memorable cure of Beclard accomplished, and which doubtless contributed largely to confer reputation on the plan. Even in those instances obviously associated with conditions of system demanding rectification; as a prerequisite to the improvement of the local affection, a restraint is imposed on the use of the otherwise appropriate medicines of any activity, by an apprehension of injury from the introduction of such articles into the stomach. But this is carrying matters to ultraism.

Considering how much the gastric lesion is dependent on a general vitiation for its origin and maintenance, surely common sense dictates a resort to those means the best calculated to correct or to do it away, and to which endeavour we are encouraged by the occasional proofs of the healing of the ulcer, on the restoration of better health. Guided by this principle, I have never hesitated to venture the cautious administration of remedies when I thought they held out the promise of utility. To indicate these in detail, cannot be necessary, and it may suffice to state, that they consist of the means to which recurrence is usually had in cachexies, accommodating them to the varieties of such depravations of body.

As operating more immediately on the topical affection, and particularly adapted to it when actively inflammatory, bleeding by leeches or cups to the epigastrium, followed by blistering or other modes of counter-irritation over the same part, repeated from time to time, according to the exigency, is so decidedly efficacious, that it should never be pretermitted or neglected. An attention to the bowels, so far as to obviate constipation, and where enemata answer the purpose, they are to be preferred to

laxative medicines. What else remains to be done, is little more than the palliation of distressing or painful symptoms as they may arise. Every thing, however, will prove nugatory, without the strictest regulation of regimen. As to diet, we are to be governed in some degree by actual experiment, selecting those articles that on the whole agree best with the patient, in which respect there is considerable difference, even in the same person, at different times. Certain precepts, however, are of universal application. The food is invariably to be light, of the easiest digestion, and as small in quantity as shall suffice to keep down the inordinate cravings of hunger, which in themselves irritating, are productive of exasperation, and with this intention, it may be oftener repeated than the customary stated meals. It is a common remark, that there is always most comfort in this affection when the stomach is empty, and that ingesta, solid or fluid, in the slightest degree heating or stimulating, are ill borne, however small the amount. Bodily exercise, except the gentle, is pernicious, and as far as possible, the mind is also to be kept at ease, the cares and anxieties, especially of business, avoided, and it recreated and amused.

From the fragility of the cicatrix, even when most perfectly formed, it should be recollected, that it is very liable to laceration by slight causes. Cruveilhier tells us, that he has known it to be done three times in the same individual at intervals of from two to four years. Doubting this, it not being susceptible of positive proof, we have instances of ocular demonstration of ruptures. They have happened principally from vomiting, induced by offensive ingesta, or emetics;—and hence, the further propriety of guarding against these and other causes of such disastrous consequences.

As the *cancerous lesions* of the stomach are in their symptoms, essentially the same as those of which I have just disposed, I shall, in order to avoid an unnecessary recapitulation, be content to refer with some few additions, to what has already been said.

Between the simple and cancerous ulceration of the viscus I am not, indeed, aware, in this respect, of any difference whatever, in any one stage of their progress. Contrary to what might be expected there is wanting all those sufferings produced by cancer in other parts of the body. The burning, the gnawing, the eating, corroding sensations described by writers, I have never witnessed

in any one of the numerous cases that have come under my care. On this point, I wish to be heard, since I have seen much of the disease, and hence my experience is entitled to attention. What has been said of the one, I again aver, is equally applicable to the other affection. From the rarity of the occurrence in either, of the agony of the stomach, for never have I witnessed it, I can not help suspecting that it has been exaggerated by those who have noticed it, and that it was merely a cardialgic sensation, occasioned by imperfect digestion or the acrid secretions of the viscus itself. It is really astonishing the extent to which this lesion may go without its being betrayed by any very serious local suffering, or constitutional depravation. Many cases of which I am possessed, could I recite, in illustration of the fact.

The causes of this distemperature, deserve to be now traced out with some particularity. It seems, in not a few instances on record, to have been hereditary, so far at least, that a predisposition to it was transmitted from generation to generation to such an extent, as to have affected several of the family, of which, that of the Bonapartes affords a conspicuous illustration, the father, a son, and daughter, having died of it.

Nor, probably, has the sex less influence on its production, the male being more liable to it than the female, which, however, may be mainly owing to the greater exposure of the former to its exciting or accessory causes—such as gross feeding, intemperance, &c. Yet partly, the comparative exemption of women, is also to be found in their peculiar economy. The uterus and mammæ are so singularly prone to cancerous degeneration, that they seem to serve as *diverticula* of the affection from other organs. Be it, however, as it may, the fact of their immunity in this respect, corresponds with general experience. Of the many cases I have seen of the disease, only one was in a woman.

Even more, perhaps, does a certain period of life predispose to the event, it seldom or never happening prior to puberty, or in old age, and is most usual somewhat after the meridian of life. Certain conditions of system have a further effect. More frequently do we meet with it in the cold phlegmatic temperament, or vitiated habits of body, than the reverse, or the ardent and sanguineous, or otherwise hale and robust.

Not a little curious is it, that the affection appears to be of

wider prevalence at particular seasons, even to the observance in a degree of an epidemic character. During the month of April, 1832, I saw eight cases of it absolutely demonstrated by autopsic inspections, and such occasional occurrences, though not to an equal extent, have at other times been noticed by me, without any obvious reason for the phenomenon.

The directly exciting causes of the affection are all those agencies which disorder the stomach, by inducing irritation or phlogosis of it, and I am persuaded, as well from the intimate consent between the brain and that viscus, as from what I have positively seen myself, that griefs, anxieties, mortifications, and such like moral influences, are not the least operative.

Combined with a most baneful climate, it seems certain, that the sad reverses of his once glorious fortune, exasperated by the harassments to which he was exposed during his captivity, developed, and envenomed the attack of the disease, in the late illustrious Emperor of France, of which he fell a victim, under circumstances that cannot now, even at this distant day, be contemplated without exciting in every generous heart, emotions of sorrow for the peculiar severity of his fate, mingled with sentiments of unmitigated indignation against all those concerned in its accomplishment. The records of time, we shall in vain search for any similar instance of wanton and barbarous cruelty. Even the treatment of the Ottoman Emperor,* in a dark and ferocious age, enclosed as he was, in an iron cage, and exhibited as a spectacle to the vulgar gaze, by his victorious foe, was ultimately redeemed by some traits of liberality, or remorse. But in regard to Napoleon, to the last moments of his existence, the same course of malignant persecution was continued without interruption, or alleviation,—fretted incessantly by vexations, annoyances, or by more positive interferences with the remnants of his peace and happiness. Cold, and vindictive, those to whose custody he was committed, seem to have been alike insensible to the magnanimous impulses excited in better persons by a retrospect of his former elevation, or the contemplation of his immediate afflictions, and he was permitted to perish, derelict, and forlorn, in a distant and dreary region, with no single expression of sympathy for his misfortunes, or one act of tenderness or benevolence, to assuage

* Baajzet.

the agonies of a lingering illness. But never did he falter in resolution, or prove recreant to what was due to himself, or his own greatness,—comforted and sustained in his most painful distresses, by the proud reflection, that the sovereigns of all Europe cowered to the supremacy of his genius, and arrayed in arms to the amount of millions, thought themselves only safe in a sort of incarceration of him, which admitted of no possibility of escape. To have heard of his return again to the theatre of action, would have been as appalling to these miscreants, as the sound of the trump of the Archangel, proclaiming the dissolution of all things.

Casting no national reflections, it is to the agents of the governments, or the governments themselves, by which these atrocities were perpetrated, that I apply my strictures. Nor is this tribute, on my part, misplaced. Embracing that of medicine, within the wide scope of the improvements he instituted, more was done by him for its advancement, than by all the rulers who have ever existed. This excites my gratitude, and gives him a title to the veneration of every votary of the science.

Mostly, and perhaps, exclusively, the affection is seated in the pylorus or cardia, and much oftener in the former than the latter position. Differing as it does in some of its features, when thus oppositely situated, it may be right to indicate the criteria of distinction. In the pyloric case, the food gets readily into the stomach, digestion is partially checked only, and some chyme passes into the duodenum to the last. Emaciation is, hence, comparatively slow. The cardia, however, being affected, the intromission of food, is in a great measure prevented, and the system thus deprived of nutriment, becomes correspondently exhausted. There is, too, in the first, vomiting, and in the second, regurgitation. Besides which, where the person is attenuated, and the pyloric tumour large, it may be felt, as I have known in several cases. But in cancerous ulceration of the body of the stomach, independently of scirrhus of its extremities, if such really ever exist, which is doubtful, I am not aware of any sign of discrimination, entitled to confidence, either as regards simple ulceration of the viscus, or some other disease of itself, and its associate organs. The phenomena of scirrhus of the pylorus may be counterfeited by a similar state of the pancreas, and those of the cardia, by stricture of the œsophagus, or mere irritability of the upper passage of the stomach. From the examples of the latter, I have

seen mistaken for cardiac disorganization, I shall select a case particularly interesting, which I attended in consultation with Dr. Physick. It was that of a gentleman from Virginia, sent to us for some supposed structural lesion of the cardia. For several months prior to our visiting him, he had been afflicted by a difficulty to get any description of food into the stomach. As soon as it reached the upper orifice, a violent revulsion took place, by which it was forcibly ejected. The easy introduction of a very large bougie, demonstrated that there was no mechanical obstruction, and by quieting the irritability of the part, chiefly by the daily introduction of the instrument, he speedily recovered.

Need it be said that no expectation can reasonably be entertained of curing this cancerous affection in any of its stages. Early recognized, something may be probably done to stay its career, or to mitigate its severity, and such is the amount of our best efforts.

Its anatomical characters vary, according to the progress it has made. Death taking place in the first stage, the lesion will be detected of one or the other extremity to which allusion has been made. It is, I repeat, far more usual in the pyloric than the cardiac orifice, and a coincidence of it in both, I am not aware of any one having observed. When the former is affected, we are presented with various changes, from mere thickening and induration of the part, to a tumeroid mass of diverse dimensions and consistency. I have seen it as small as half an inch, and as large as two inches in diameter, confined to the pylorus, or extending, the change of structure at least, into the cavity of the stomach, or to the duodenum, or both. Cutting into this mass, it is found to resemble a section of a potatoe, at other times that of a turnip, or of the brain, or again is denser, more solid, almost cartilaginous, like real scirrhus, and hence the respective designations, *solanoid*, *napiform*, from the turnip-like fibrous texture, *cephaloid*, and *scirrhoma*, the last the most common. But it happens that these several varieties enter into the composition of the same tumour, occupying either distinct sections of it, or the whole intimately mixed.

In some particulars, the degeneration of the cardia differs. Nothing anormal is usually to be perceived till the stomach is opened. Even then, instead of a tumeroid growth around the orifice, as in the other case, we find more or less narrowing of it,

by the deposition of extraneous matter, which may be variously arranged, sometimes in the form of an annular stricture, sometimes in irregular masses, sometimes in mere thickening, condensation or induration of texture, and sometimes as a cauliflower fungus, hanging down into the ventricular cavity.

Cancerous lesions of the other portions of the stomach are held to be very rare events as primary affections. But essentially such as I have described as incident to its extremities, are said to have been observed, and still more confidently of late its liability is maintained to *primitive* cancerous ulceration, so called in contradistinction to that following antecedent scirrhusity. No instance without scirrhusity, has come under my observation. But with that lesion of the pylorus, I have seen several times the cavity of the viscus studded with deposits of similar matter, from the size of a split pea, to quadruple the dimensions, resembling very much some of the solid infiltrated tubercular masses.

From the state of the orifice noticed, after a while, proceeds ulceration, seldom of any extent at the superior, and very widely at the inferior, even to the destruction of more than half of the stomach. It is so analogous to simple ulceration, in its worst form, that were it not for the associate scirrhusity, it would often be impossible to distinguish the two, with any certainty. The account of the one may therefore suffice generally of the other condition. Yet there are in some instances further criteria. Cancerous inflammation has little tendency to adhesion with foreign tissues or surfaces. It preys on the part which it seizes, till it is destroyed by the ravages of ultimate ulceration. But occasionally spreading from the stomach, it involves an adjacent organ, into which cancerous matter is deposited, causing the same sort of degeneration, and an imperfect adhesion between them may take place. This has been remarked with regard to the colon, pancreas, spleen and especially the liver.

My intention is not to dwell on the pathology of this affection. By such an inquiry, I should unavoidably be led into a discussion of the general doctrine of cancer, which would be here out of place. The subject, indeed, is one of much obscurity, and perhaps all that can be safely averred, in relation to it, is that the origin of cancer is intimately connected with the process of a vitiated secretion, of which the specific deposit destructive of organization, and its consequences, are the products. No further

can we proceed in the explanation of the phenomenon, than, perhaps, the predication that certain causes, by operating on a peculiar diathesis, which, in our ignorance, is vaguely termed the *cancerous cachexy*, occasions the morbid secretion to which I have alluded. The production of tubercles in phthisis pulmonalis, affords a very striking analogy. Exactly like cancer, the foundation is there laid in a peculiar predisposition, which may be excited in a similar way into action, leading to the development of these adventitious masses, to end in not less fatal lesions. As regards immediately the affection of the stomach, it seems to be admitted, that it commences in irritation of the viscus. But as to the precise nature of that irritation, whether inflammatory or otherwise, a considerable difference of opinion prevails. From all the cases I have seen, confirmed by the tenor of the history of the disease, I am persuaded that if phlogistic, it is a state of little activity, being rather of the kind and degree which appertains to an unsound body.

Determining the existence of simple scirrhus, all that we can do is to assuage pain by topical bleeding, blistering, and anodynes,—to keep the bowels open by enemata or the milder laxatives, and restrict the diet to the bland vegetable mucilages. Every variety of narcotic and sedative, however, has been used, opium, hemlock, henbane, belladonna, stramonium, alone or combined with mercury or arsenic. The burnt sponge and the preparations of iodine, have also been praised. But under the circumstances that these last remedies have been proposed, I should very much apprehend the case to be desperate.

Concerning open cancer of the stomach, I have still less to suggest. Existing in any part of the body, even when exposed to our senses, watched in all its fluctuations, and approachable to the direct application of remedies, we are aware of its indomitable nature. Concealed in the dark cavern of the stomach, one of the vital organs, what can we hope or expect from the impotent resources of our art? Of the numerous cases of this kind recorded, the most conspicuous is that of Napoleon Bonaparte, to which I have previously alluded. It was by this disease, a small ulcer in the stomach, that Almighty God decreed, after a series of preparatory humiliations, to extinguish the existence of one of the most eminent of created beings, seemingly to teach an impressive lesson of the dependence of our mortal condition on his will, and

the perishable tendencies of all sublunary power, with its attendant grandeur, vanities, and glories.

"O mighty Cæsar! dost thou lie so low?
Are all thy conquests, glories, triumphs, spoils,
Shrunk to this little measure?
But yesterday, the word of Cæsar might
Have stood against the world: now lies he there,
And none so poor to do him reverence."

DYSPEPSIA OR INDIGESTION.

To the refinements of civilization we are mainly indebted for the prevalent and troublesome affection which has received this title. It seems scarcely to belong to the savage or barbarous condition, and comparatively seldom occurs among the lower or labouring people of active occupations and sober dispositions.

As we deviate, however, from nature in the cultivation of our sensibilities, moral or physical, or in our habits or pursuits, particularly in our modes of living, so are the exposures to it widened or multiplied.

No more, probably, than in the brute creation, should we have vitiated digestion, were it not for an artificial scheme of life. But in the present state of society, so pervading is it, that no age, sex, or rank, or condition, entirely escapes. Children occasionally have it,—the annuated are not exempt from it,—we see it as much in women as men,—it is the affliction of the studious, and has become the annoyance of the sedentary tradesman, artificer, and manufacturer,—though it scourges above all—the votary of fashion, the indolent voluptuary, and the grosser sensualist or debauchee.

Dyspepsia, strictly defined, means difficult, bad, or disordered digestion. But the function suffering variously, as well in degree as kind, the title applied to its derangements may not always adequately express their several modifications.

On this account writers have substituted other appellations, which, however are equally vague and indefinite, such as the spleen, vapours, melancholy, hypochondriasis, biliary derangement, &c. Egregiously, indeed, have we erred in this instance, by a contemplation of an effect only, and that as an incident to the stomach exclusively.

Digestion is a series of operations of a very complex apparatus, any one portion of which being out of order, the function becomes in a greater or less degree deranged;—and it is this derangement of machinery, and not the vitiation of product, which is really the object of reparation. As well might the morbid discharges in any of the profluvia be held to be the essential disease, as here the imperfect concoction of food be so deemed. Equally in each case are these the result of an antecedent lesion of parts, and being simply consequences, must be kept up so long as such lesion may endure.

In adhering to the term dyspepsia, I am therefore led, rather in compliance with usage, than from considering it as declaratory of any just pathological views, which are only attainable by a careful investigation of the state of those structures concerned in the performance of the assimilative offices.

To present a full exposition of the subject, it were obviously required to treat of indigestion as it exists in, or is dependent on each and every part of the alimentary canal, and of the subsidiary or collatitious organs. Nearly as much of the process goes on in the upper and lower bowels as in the stomach itself, not to mention the indispensable contribution it receives from the liver, pancreas, the lacteals, or its final consummation in the lungs by the conversion of chyle into blood. Diverse, too, are the conditions of these several portions of the digestive apparatus when the function is disordered, each of which should be no less indicated to complete the exhibition.

The execution, however, of such an undertaking in detail as is imposed by so extensive a view, not now proposing, I shall apply myself chiefly to the more ordinary forms of the affection, as well in regard to their position as nature.

Commencing with those of the stomach, some attention will hereafter, when coming to the consideration of the diseases of other organs engaged in digestion, be appropriated to their share in influencing the dyspeptic condition.

Dyspepsia may be either acute or chronic. When suddenly induced by an offended stomach, which it often is, it mostly passes away without attracting any regard,—though in children especially, by permitting repetitions of attack, from continued indulgences, it sometimes becomes speedily riveted and confirmed. The affection, however, of adult or more advanced life, such as

this term is conventionally restricted to, is of gradual formation, creeping on for a season so slowly, in some instances, as scarcely to be recognized, or at least to excite any serious complaints.

Both in the mode of its approach, and rapidity of development does it differ. But on an average, I think it is distinguished in the commencement by a sort of general *malaise*, or indefinite wretchedness, attended by a sense of oppression after eating, at the epigastrium, sour eructations, sometimes vomiting, loss of animation and inclination to exertion, mental or corporeal, with a feeble, accelerated circulation, lowness of temperature of the cutaneous surface, and which is somewhat pale and dry.

This state may last for a considerable period without any material detriment to health, though each meal shall reproduce the same sort of distress. The case being more evolved, there are gnawing or undulatory, or throbbing sensations in the stomach, especially when it is empty, or a sense of sinking, with some constriction of the throat,—the tongue soft, flabby, flat, and slightly covered by a whitish or brownish fur,—the bowels constipated, the breath foul, the secretions defective, and increased languor and listlessness of mind and body are alike manifested. Greater chilliness and pallor immediately after eating, take place, soon followed by headache or heaviness and somnolency, which when indulged, the sleep so far from refreshing, the individual wakes up still more uncomfortable, or even very miserable. The appetite is not always the same, or the powers of digestion equally affected. Each is ordinarily much impaired—but the former is sometimes invigorated or craving, and the latter, though lingering, ultimately pretty well performed, judging from the aspect of the stools, which, with the exception of a want of bile, may be natural, and certainly without any mixture of unwrought alimentary substances. In other instances, however, the appetite is nearly gone or becomes exceedingly depraved, soliciting even the most outré or improper articles, as chalk, dirt, pickles or acescent unripe fruits, &c.

Continuing for any length of time, and occasionally from the very beginning, the disease implicates more conspicuously the mind, producing great fretfulness of temper, turbidness and confusion of ideas, or extreme dejection of spirits, amounting even to inveterate hypochondriasm. To such an extent, indeed, may the intellectual faculties be affected, that the usefulness of the person

is destroyed, complaining perpetually of inability to manage the most ordinary concerns. "He," says Cheyne, an old writer, "who would have a clear head, must have a sound stomach." The connection between these organs and their reciprocal influence on each other, are certainly very close, as is exemplified both in health and disease.

As dyspepsia advances farther, new or aggravated symptoms are disclosed, and now we have pyrosis, gastrodynia, cardialgia, flatulence, with putrescent, niderose belchings, or great distension of the epigastrium and extreme irritability of stomach,—the aliments being puked or regurgitated or rather *sputated* as soon as swallowed, one or more of these affections existing,—to which may be added obstinate constipation, the stools when procured being various, though usually of a firm consistence, of a clay or slate colour, indicative of the absence of bile, or are occasionally light, soft, and frothy, mixed with portions of undigested food, and the discharges attended with some nausea and griping. The skin, too, which from the first, is dry, now becomes more so, or is even husky,—changes its pallor to a dingy or sallow hue, and the countenance has the expression of anxiety or haggardness. Not the least distress is experienced by the loss of rest. Nervous vigilance generally prevails, and the sleep which may be procured, is broken by unpleasant dreams, or occasional paroxysms of incubus.

These are among the more customary symptoms of an aggravated attack. But we occasionally meet with some anormal affections, such as an uneasiness or an ache in the breast, or side, the right side at first, though I have known it otherwise, or in the left,—or of the head, and with no little perversion or disorder of vision. The complaints of the eyes, are sometimes very extraordinary. More than once I have seen the vision doubled—still oftener inverted—and in one instance temporary blindness. Not less common is vertigo, tinnitus aurium, headache, acute tenderness of the scalp, and palpitations of the heart. Now and then the nervous and muscular systems are prodigiously affected. Hysteria in females is common, and I have met with tetanoid convulsions so violent as to require the united strength of several persons to restrain the patient in a paroxysm.

Not arrested, the case is prone, in some instances, henceforward to assume a different aspect. Extreme atony of the stomach,

with general debility and derangement of health, sometimes takes place, especially in those of delicate or depraved constitutions. But in other instances the vascular system, hitherto little disturbed, now becomes implicated, shown by a hard, quick, corded pulse, hectic flushes, dry parched skin, burning in the palms of the hands and soles of the feet, clean polished tongue, or, what is more common, the centre heavily loaded, with polished tip and edges,—great thirst, or rather a demand for cold or acid drinks,—a sense of fulness and distension in the epigastric and hypochondriac regions, with tenderness on pressure—heat of stomach and aphthous ulcers of the mouth, or a full crop of eruptions on the face. The urine, which in the previous state of nervous irritation, had been copious and pellucid, at this period undergoes a change, depositing a lateritious or pink sediment, or is oily on the surface, as in some instances of diabetes, owing to defective digestion and assimilation of the food. The bowels, heretofore costive, now are apt to give way, and diarrhœa becomes the habit of the body. Extending to the lungs, this gastric irritation sometimes induces pulmonary disease, at first tussicular, gradually simulating catarrhal or even tubercular consumption. Generally, however, there is a gradual wasting of strength and emaciation, particularly of the lower extremities, with sometimes numbness or immobility, so that locomotion can no longer be performed, the limbs dangling as if paralytic. The case now is essentially chronic gastritis, diversely complicated with nervous or other affections. Let it not, however, be supposed that such is the uniform tenor of the disease. The reverse perhaps oftener happens, or it pursues a course of infinitely less violence, occasionally varied by mitigations or exacerbations, and with these alternations endures for an indefinite period, till finally an entire recovery takes place, or it degenerates into a hopeless state of constitutional depravation. On this occurring, unequivocal as may have been its original aspect and character, dyspepsia sometimes becomes exceedingly obscure, or is entirely concealed by the absence of its peculiar signs, or disguised by the livery of some different disease. Cases of this description may proceed from an affection of some one or more of other organs, which, as we are presently to see, from the extension of their irritations to the stomach, induce the dyspeptic condition, or by the latter viscus spreading its influence to these same parts, they become involved,

so that in either mode a complication arises of extraneous and sometimes of predominant symptoms. Dyspepsia, in a word, is lost sight of in the prepotency of a foreign lesion.

The causes of this affection are such as act directly on the stomach, or indirectly through the intervention of other portions of the system. Of the first, among the most operative, are indulgences in eating or drinking, so as preternaturally to stimulate or distend the stomach—or the use of certain unwholesome or imperfectly cooked articles—or an undue limitation of diet, as is practiced to obviate or reduce obesity, or to subdue protracted diseases. The most opposite modes of living, the full and stimulating, or the penurious and abstemious in extremes, are alike productive of indigestion. Examples of the latter are not so common, though still familiar, more especially to be deduced from females in high life, desirous of acquiring or retaining delicacy, or attenuation of frame. It is also remarked by some writers that the numerous and protracted fasts of the Catholic church have a similar effect on those by whom they are piously observed, in the hope, that by thus mortifying the flesh, heaven is propitiated. Be this as it may, from an exceedingly low diet, too long maintained in the management of disease, I have frequently witnessed the same effect, or perhaps, actual gastritis, or with the irritation thus created, the tongue becoming florid, the epigastrium tender, &c. The ultraism in this respect, resulting, in no slight degree, from the dominion of a set of notions imported from abroad, I am convinced has proved a fruitful source of gastric derangements among us. Even more it has done, however, by vitiating the whole nutritive processes, thereby inducing a state of cachexy, affecting both the solids and fluids. From absolute starvation, analogous though more prompt and exacerbated consequences arise, of which we have striking evidence in shipwrecked mariners deprived of food, and in the experiments of starving animals. Emptiness, in any way, proves what has been happily called the “stimulus of inanition,” as we see in the sudden withdrawal of the water in ascites, and I may add, parturition, each being apt to be followed by fever. But in the case of inadequate supply, or total want of nutriment and drink, there is, with the influence of emptiness, the irritation of hunger and thirst.

The most pernicious articles in excess, are acid, vinous, malt,

or spirituous drinks, especially in the shape of punch, or strong green tea,—exclusive vegetable matter, especially, if it be crude or flatulent—or gross animal food, whether fresh or salted, or smoked—many of the condiments, and nearly all the things included in the term dessert.

Detrimental as these articles may be, they are rendered still more so, by the incongruous mixtures of them, several of the most discordant qualities being taken together, creative of all sorts of contentious movements in the stomach, a tumultuous uproar, always ending in mischief, and above all by the rapidity with which they are swallowed. *Bolting* is the term used to express the hurried manner of eating, in which it is said we excel every other people, and perhaps truly, owing in part, to our eagerness to get on in whatever we undertake, and still more to the quantity our tables supply to be disposed of. As practised in Europe our people cannot spare time to pick bones, and leisurely to chew the scrapings.

Taking, habitually, drugs, conduces to the same end, as the frequent repetition of emetics, or purgatives, or opiates and other narcotics. Tampering, however, with any medicine or medicines, so much the practice with some people of valetudinary dispositions, is very detrimental. Every ache or discomfort, real or imaginary, must be relieved by a recurrence to some supposed remedy, till finally, the powers of the stomach are worn out, and derangements, either functional or structural, take place. It would be salutary were such people constantly to bear in mind the epitaph of the Italian count, who fell a victim to this bad habit:

“I was *well*,
Wished to be better,
Took physic, and *died*.”

Nor can the profession escape the imputation of lending its contribution to this mischief. Called to a case of disease of such obscurity, that no distinct notion can be formed of it, we go on groping in the dark, pouring down drugs empirically or at least tentatively, till the stomach gives way, and its derangements are added to the pre-existing affection, by which a case is made of greater complexity, and of enhanced difficulty of cure. It is not easy always to avoid this course, from the ignorance or preju-

dices of mankind. The predominant estimate of the profession, even among the most enlightened people, leads to the delusive supposition that the *materia medica* has a remedy for every disease, and that the want of success under any given circumstances, is owing to the poverty of resource of the practitioner in attendance. Confidence is soon withdrawn should he intermit his exertions, which perceiving, he too often multiplies his administrations to avoid a dismissal, or to have imposed on him some one of the fraternity, who it is expected will bring forth fresh supplies. The consultation taking place, the new armory of weapons is opened and applied, with only an exasperation of the case. Not satisfied, however, further trials of others are made—there is a repetition of a similar proceeding, and the catastrophe is completed. This, which might by some be suspected as a sketch of fancy, is a faithful and unexaggerated delineation of a reality, I have frequently seen and deplored. Convinced that he was falling a victim to this very practice, the Emperor Hadrian deliberately prepared as an inscription for his tomb:

“It was the multitude of physicians that killed the Emperor.”

The causes which I shall first mention as operating through the medium of the system on the stomach, are sluggish or sedentary habits, and intense study or application to business within doors, or any perturbing or depressing passion or emotion long indulged. It is an interesting fact, that while exercise is promotive of the health of the corporeal functions, the occupation of the mind, when intense, at least, has a contrary tendency, particularly as to those of the stomach, and hence the student, or the afflicted, or care worn, is nearly always dyspeptic.

Dress, too thin, or inappropriate to the season, has, also, a material influence. Cold to the exterior surface, and particularly to the feet, irritates the internal surfaces, and often that of the stomach. More, however, is to be ascribed to the modern fashion among females of tight lacing, which, by mechanical pressure, affects the stomach. We learn from a late French writer, that corsets cause half the dyspepsia of Paris, and that, in several cases, the stomach was found on dissection, permanently contracted in the centre, like an hour-glass, by the compression. Great mischief from this preposterous custom has come under my own observa-

tion. Not to mention other injuries from it, such as irregularity in the catamenia, spinal irritation, and costiveness, pulmonary consumption, inaptitude to bear children, &c. I can confidently state, that I am habitually consulted for dyspepsia and its associate affections, assignable to this fantastic usage. We marvel at the absurdity of the crimped feet of the Chinese women, without advertg to the still wider deviation from nature in the contracted waists and exaggerated buttocks, of the ultra *fashionables* of the present day, of Europe and this country—exhibiting a spectacle of deformity, the most hideous,—alike destructive of all symmetrical proportion, grace of movement, and the enjoyment of health.

The most common of the causes of the disease, in certain parts of our country, is the enormous consumption of tobacco in the several forms. Certain I am, at least, that a large proportion of the cases of it, which come to me, are thus produced. It is usually very obstinate, and sometimes of a truly melancholy character. Easy as it were to cite numerous instances to this purport, I must be content with a limitation.

By a member of congress from the West, in the meridian of life, and of a very stout frame, I was some time since consulted, who told me, that he laboured under the greatest physical and moral infirmity, which he was utterly unable to explain, and that, from having been one of the most healthy and fearless of men, he had become, to use his own phrase, “sick all over and as tinid as a girl.” He could not present even a petition to congress, much less say a word concerning it, though he had long been a practising lawyer, and served much in legislative bodies.

By any ordinary noise he was startled, or thrown into tremulousness, and was afraid to be alone at night. His appetite and digestion were gone—he had painful sensations at the pit of the stomach, and unrelenting constipated bowels.

During the narrative of his sufferings his aspect was ghastly, approaching the haggard wildness of mental distemperature. On inquiry, I found, that his consumption of tobacco was almost incredible, by chewing, snuffing, and smoking. Being satisfied that all his misery arose from this poisonous weed, its use was discontinued, and in a few weeks he entirely recovered.

Distressing as was this case, I have seen others, from the same cause, even more deplorable. Two young men from the country

were in succession brought to me for advice, whom I found in a state of insanity very much resembling delirium tremens. Each I was told had chewed and smoked tobacco to excess, though perfectly temperate as regarded drink, and which representation proved to be correct. The farther account given me was, that early in life, adopting this bad practice, it grew with their growth. Dyspepsia soon occurred, attended by great derangement of the nervous system, and ultimately the mania I have mentioned. But I have also seen the same condition very speedily induced.

Five years ago I was requested to visit a young man at one of the hotels in this city, who had been a resident in it for several weeks. The general aspect of the case so strikingly resembled delirium tremens, that I at once pronounced it to be that affection. But I was assured of his sobriety, and that he had been brought to his present situation by having kept his bed for several days, under the influence of nostalgia, during which period he actually subsisted on tobacco. More recently, I saw quite a youth affected in precisely the same manner, owing, most unquestionably, to the exorbitant use of cigars. Both of these cases were cured chiefly by abstinence from this pernicious practice.

These are the prominent causes of what may be termed idiopathic dyspepsia. As already intimated, it is, however, sometimes a symptomatic affection, emanating from a diseased state of other parts—the gums, bowels, the liver, the spleen, the pancreas, the kidneys, uterus, the brain, spinal marrow, &c.

The sympathy between the gums and stomach is illustrated more especially in the painful dentition of children, in which the latter organ often becomes seriously disordered. As an example of this connection, leading to dyspepsia, the case I shall relate may suffice. Many years ago I was consulted by a lady from Natchez for the disease, of long continuance, and of a very harassing nature. Discovering that her gums were highly irritated, from a very bad state of her teeth, I suspected them to be the cause of the suffering, and had all the carious ones extracted, by which, without any medicine, she in a short time recovered. But, in a few months, having an artificial set, which being badly adjusted, was productive of much irritation, the dyspepsia returned with equal violence, and again ceased on the removal of the teeth. These being subsequently well arranged, she has since worn them without any recurrence of the disease. Teeth, in another mode,

may have a similar effect, as when in such a condition as no longer to perform mastication.

That the more ordinary disorders of all the chylopoietic viscera, the liver, pancreas, &c., may be reflected on the stomach so as to produce this effect, and that even to functional constipation it is often owing, is well known. But occasionally I have seen it, and of the most inveterate character, dependent on intestinal strictures. In 1826 I attended, with the late Professor Physick, a young friend of mine, in one of the most inveterate attacks of dyspepsia that I ever encountered. Baffled in our endeavours to cure him, he went to Europe, and consulted there, successively, the most eminent physicians, who took the same view of the case. Dying, finally, in Paris, he was opened by the celebrated Beclard, who informed me, that the only important lesion was a stricture of the colon, to such an extent, that a small quill could scarcely penetrate through it. From strictures of the rectum, which are far more common, I have frequently seen the most afflicting dyspeptic derangements induced, and what, perhaps, has been less suspected, occasionally, by hemorrhoidal derangements.

Two cases, from several more which I might adduce, may adequately illustrate this point. My attention was particularly called, some time since, to that of a middle aged gentleman, who had suffered several years so severely from dyspepsia, that even his life was deemed in jeopardy. The disease was exceedingly well marked. Learning that during the whole time, with scarcely an intermission, he had been annoyed by painful hemorrhoids, these were removed, and almost immediately he recovered his health.

Even a worse case, in a gentleman somewhat younger, subsequently came under my care. To great emaciation and hectic irritation, was added a condition of stomach which almost precluded the retention of nutriment of any description. More or less of whatever was received, soon returned by a sort of spasmodic regurgitation. Every evening he became excessively oppressed, and was only relieved by vomiting of a very large quantity of a corrosive acid fluid;—which, on different occasions, being deposited on the grass of his lawn, this was as completely killed, as if by salt and water poured on it. No course of treatment I could devise proved of any essential service

to him, till having ascertained that he had long been afflicted with piles, a circumstance previously concealed from me, they were extirpated, and with the happiest effect.

Nephritic affections are very apt to bring the stomach into dyspeptic states;—and, perhaps, from no source does it suffer more in this respect, than by the uterine derangements. Every one of these, indeed, of any inveteracy, conduces to indigestion, though it is mostly found in connection with the irregularities of the menstrual discharge.

Chronic eruptions, especially of the face, repelled by cosmetics or other means, sometimes, moreover, occasion it, and also the repercussion, or metastasis, or misplacement of other diseases, one of the most prominent instances of which is afforded by gout. Destined to the articular structure as its proper seat, if this is prevented in any way, it never fails to harass the internal organs, and especially the digestive. Every practitioner of any experience must be familiar with examples of dyspepsia, even of the most fixed and obstinate character, immediately relieved by a regular attack of podagra. There is, indeed, much reason to suspect that no small portion of the cases of indigestion is really gout in its atonic or misplaced states, and I am sorry to say that the vast increase of disorders of this sort, which confessedly has taken place of late years, may be plausibly ascribed to the partial reformations of our habits of living. It will hereafter appear, that regular gout formerly prevailed to an enormous extent in this community, at a period when even its highest society was sullied by an inordinate consumption of wine. This constant stimulation drove it on the extremities;—but, since we have become more temperate, it is still generated, though so feebly as to linger among the digestive apparatus, precisely as it does in women of moderate propensities to drink. We have, in a word, exchanged podagra for dyspepsia, and to get clear of both in a greater degree, severer restrictions must be imposed on our potations—and perhaps, also, on luxurious feeding.

No two organs have more intimate relations than the brain and stomach, or so uniformly reciprocate their affections, and hence dyspepsia is a common product of cerebral disturbance, either physical or moral. An allusion to the effect of the latter has been previously made. As frequently, however, is it to be traced to lesions of the spinal marrow, and especially to those of

the medulla oblongata, as might be presumed from the control of the nerves, emanating from this source, over the digestive operations.

In its more simple and elementary forms, gastric dyspepsia is readily recognized. But very different is it as to some of its anomalous modes and complications. The case with which it is most apt to be confounded, are certain states of the duodenum, and of that part of the colon which passes nearest the stomach. These portions of the intestinal tube are probably in the same condition as the stomach itself, or, in other words, that the part of the digestive process assigned to them is interrupted, and, of course, essentially similar phenomena are presented. By a careful observation, however, they may generally be discriminated. Not to anticipate what I shall hereafter have to say, when treating of these intestinal affections, I shall now only remark, that, in the duodenal, the imitative symptoms of gastric dyspepsia, such as oppression, &c., come on much later after each meal, or not until the food has escaped out of the stomach;—and that in the case of the colon, the process of fæcation is badly performed.

Complicated, however, as dyspepsia usually becomes in its progress, it is extremely difficult to arrive at a just diagnosis in all cases. The object of our inquiries, under such circumstances, should be, to ascertain whether the case is a primary or secondary affection, as the treatment is modified accordingly. Being satisfied on this point, or that the stomach is the original and actual seat of the affection, we are next to endeavour, as equally important, to determine its precise condition, how far it is simply irritated or inflamed, functionally or more seriously disordered. The discriminating signs here need not be repeated. But there are some purely nervous states of the stomach which must not be mistaken for dyspepsia, and to these I shall now call attention.

My intention is first to speak of what is denominated an *irritable or sensitive stomach*. Generally, there is here no great uneasiness in the viscus till food is taken, when pretty violent pain is at once occasioned, and continued in some degree throughout the digestive process, which is lingering. The pain may be that of heat or scalding, or tensive, gravative or oppressive, or constrictive, in the latter instance, extending up the œsophagus, productive of stricture of the throat, and, at the same time, some

pain is felt between the shoulders, particularly under the scapulæ. The appetite is variable, not often, however, materially impaired, there is no thirst, and though a tendency to constipation exists, the stools are not changed. Discharges of urine are more frequent, paler, and copious, than natural. The tongue is usually clean, and never heavily coated, the skin unaffected in temperature or other respects, and nothing is very striking in the external aspect. But what is very peculiar, with apparently such trivial suffering, a constant querulousness prevails;—the temper fractious and impatient;—the spirits alternately excited and depressed in quick succession, and the attention wholly engrossed in watching the fluctuations of the disease, from which it can be temporarily diverted only by the most amusing conversation, or business of the deepest interest. Characteristics so prominent as the foregoing, I think, may distinguish this from its kindred affections.

Gastralgia, the second of these affections, seems to be essentially the same as the preceding, modified mainly by a more chronic condition. Be this, however, as it may, it is of a strictly neuralgic nature, and among its prominent features are the following. The pain of the stomach is occasional or intermittent, sometimes of great severity, darting or spasmodic, and is relieved rather than aggravated by pressure,—and the tongue is little or not at all changed,—there is no thirst, or desire for cold or acid fluids, the appetite is sound, and the eating of solid food, instead of increasing the uneasiness, is usually palliative for the time,—though some hours afterwards oppression is felt, and which may be followed by a colicky affection. Long as it may endure, with few exceptions, no hectic irritation is experienced, and the strength, flesh, and complexion are preserved. Though the moral and intellectual condition suffers, it is peculiar to gastralgia that, on any temporary remission of the affection, a complete restoration, in these respects, takes place. These are circumstances in which it is opposed to both gastritis and dyspepsia.

It will be well in all our reflections on the subject, to advert to the fact, that there is scarcely a complaint in which the stomach does not participate;—and whether idiopathically or sympathetically affected, from its immense influence, its derangements must be rectified, as a prerequisite to the restoration of health.

The prognosis in dyspepsia is mainly to be derived from the character of the cause occasioning it, the stage of the case, the

period of life, the habits of the patient, the general soundness of his constitution, and his temper, and disposition to submit to a course of treatment, unavoidably one of privation, and mostly protracted.

No cause, perhaps, tends more to defeat our efforts in dyspepsia, and to enrol it among the reproaches of our art, than the multitude of remedies in vogue for the disease;—the perpetual recommendation of them by impertinent, or irresponsible advisers, and the easy credulity with which they are received, so that no uniform or permanent plan of cure is maintained. Not uncommonly, indeed, does it happen, that while the regular practitioner is pursuing a course cautiously adopted, and conducted in every step by the best lights of science, he is thwarted by the interposition of a countervailing nostrum, or entirely replaced by some presumptuous impostor, who commands confidence long enough to commit irremediable mischief. The season has scarcely passed away since a practice originating in such a source, pervaded the United States, claiming as its only means, punching the stomach severely every day, and this ruffian method being indiscriminately applied to all conditions of the organ, inflammatory or otherwise, proved as disastrous as was predicted by those who, by their intelligence, were prepared to foresee the results. Can it be required of me to go on with other and similar disgusting recitals?

Few diseases, however, in itself, are more embarrassing than this to the practitioner of inexperience especially, owing to the number and diversity of analogous lesions of the stomach, or which requires greater discrimination in the management. The fact is, that our notions, generally, of dyspepsia are still vague and undefined. No derangement of the stomach, mediately or immediately, however trivial, can exist, without disturbing digestion;—and whenever it becomes at all permanent, is too often vaguely included under the denomination of dyspepsia.

Taken in the commencement, this disease may nearly always be cured, provided we can command a strict adherence to our orders. But failing in this respect, which often happens, or the case is connected with organic lesions of the stomach or other parts, it will mostly prove otherwise, and all that can be done is to palliate what cannot entirely be relieved.

The appearances on dissection, in this disease, are not well understood. As regards the earliest stage, our information is

particularly defective, since death never takes place from it alone, at this period—affording opportunities for an inspection. No marks of actual phlogosis would probably be found;—the case now being one of irritation, with some degree of vascular excitement probably. In the second stage, in many instances, the evidence of inflammation is betrayed of the most conclusive character. Being very protracted and violent in its nature, the disease often, indeed, leaves behind it, the phenomena of chronic gastritis, which will not be recapitulated. In drunkards it is not unusual, we have been told, to meet with the surface of the stomach smooth and polished;—the rugæ, or villi, having been removed by the process of absorption, from the constant irritation, applied to the mouths of the lymphatics, by the stimulus of strong liquors. This, which is the statement of the older writers, I presume to be the case of remollescence, where the mucous tissue is softened and detached;—rendering the other coats more or less bare and exposed. It is, in such instances, that we generally meet scirrhus of the pylorus or cardia, or erosions or ulcerations of the texture of the stomach, and various lesions of the intestines, particularly the duodenum or ileum, and with also, occasionally, of the liver, the spleen, pancreas, and other viscera.

Of the *pathology* of dyspepsia, I have in the first place to remark, that two circumstances among others of subordinate importance, seem indispensable to gastric digestion—that the solvent fluid of the stomach be pure, and of adequate quantity, and that, at the same time, the organ be so retentive of its muscular power as to bring its parietes to embrace the aliment, and afterwards to propel the chymous product in due season into the duodenum. Thus is the process mainly accomplished, and it being in either respect affected, unavoidably falls into derangement, constituting indigestion. But aberrations in the function may differ according to the part of the agency impaired. The solvent liquor being properly supplied, concoction goes on pretty well, though the product may linger behind, from a deficiency in the propelling power, and we have slow digestion, or conversely the latter continuing perfect, and the former wanting, the ingesta pass into the duodenum—sometimes, throughout the bowels, more or less unaltered, even as in lenteria. But inasmuch as each part of the agency, the solvent liquor, and the muscular power, has a common source in the nerves, they are usually

alike affected, and the operation in both respects is anormally performed.

Confirmatory of the preceding views, an appeal may be made to the *modus operandi* of the causes of dyspepsia. Thus improper regimen, in the widest sense of the term, the abuse of medicines, especially the narcotics, including that of tobacco,—the mental emotions and perturbations, and depressions as well as the derivative irritations from remote parts, all seem to act primarily on the organic nerves of the viscus, affecting its innervation.

Common experience, indeed, teaches that these causes directly annoy or disturb the stomach, vitiating appetite, and weakening the digestive energies. By habit the stomach may become reconciled to the influence of some of them, though it is oftener otherwise, and by continuance the effect, in the beginning slight, or transient, may be converted into the worst, and most enduring depravations.

The influence of the cerebro-spinal nerves going to the stomach, on which experiments show that digestion also materially depends, being interrupted, the process is farther disordered, and, at this stage, we have as the result acid eructations, flatulence, nausea, languor, and mental and corporeal inquietude, &c. The muscular power of the organ, equally proved to be controlled by the motor nerves, likewise suffers from a similar cause, and hence it is incapable of urging on the contents, and the sense of weight and oppression occurs. The stomach in fact is thrown into a state analogous to some of the forms of constipation of the bowels—and which state, indeed, may be shared by the whole alimentary canal.

But this explanation, so far, regards only the early period of the disease. As it advances, inflammation may occur, sub-acute or chronic—and, through the sympathy which exists between the stomach and the rest of the chylopoietic viscera, the latter become involved in the same condition to a greater or less extent.

It is at this period may be discovered tenderness of the epigastrium, and next of the hypochondriac regions, the right especially—with the other evidences of more serious hepatic disorder, such as a suspension or vitiation, in various gradations, of the biliary, and perhaps, also, of the pancreatic secretion, attended by the febrile movement, and universal disorders of health.

Both the nervous and vascular functions being thus implicated, it is quite clear that this condition cannot remain long without inducing structural disorganization, and such is proved autopsically. It sometimes happens, however, that the stomach early acquires an exquisite degree of irritability or sensibility—which, instead of passing into inflammation, its more ordinary termination, becomes chronic, and in this mode gastralgia is constituted—or, by the want of innervation, it loses its muscular power and falls into extreme torpor and atony.

Contemplating this series of phenomena, it is impossible to resist the conclusion, to which I have several times adverted, that in dyspepsia there is always some modification of positive disease of the stomach and its connections, of which the irregularities and imperfections in the act of digestion are consequent and dependent.

Exceedingly various as I have shown the treatment of the disease to be, all which can reasonably be expected from me, is to point out the course applicable to the largest number of cases, and its more customary shapes—and I begin with the idiopathic form of the disease, or that where the stomach is primarily concerned. By a review of the practice hitherto pursued, we shall see that, generally, it has been very empirical, or destitute of any fixed or enlightened principles. As in every other case, the only correct guide to its management is to be deduced from its pathology. Dyspepsia, according to my exhibition of it, consists of nervous irritation in its commencement, and hence plainly requires the means best calculated to calm or remove this condition.

For the most part, it is well to let the stomach alone, or forbearing the use of every sort of internal medicament, and particularly of any activity, to endeavour to abate and draw away the irritation to the exterior surface by a combination of depletory and revellent means,—the chief of which are local bleeding carried to an adequate extent, and then rubefacients, sinapisms, vesicatories, or the croton oil, so as to induce pustulation. As to the place of application of these means, we must be governed by the notion entertained of the source of the irritation. Conceiving it to be seated in the ganglionic nerves, it is preferable to make it to the epigastrium—or its appearing to be derived from the cerebral or spinal, in the vicinity of those nerves. It is, however, on the

whole, good practice to cup the spine, and counter-irritate the epigastrium. By this simple plan, aided by the regimen hereafter to be pointed out, I have met with no difficulty in arresting the progress of the disease, and am persuaded, from ample experience, that it is the one which only will be found productive of any uniformity of success. As corroboratory of the correctness of this view, in theory and practice, it may be remarked that whenever a metastasis of the irritation takes place to the surface, as an efflorescence or any other form of eruption, relief is ordinarily afforded. Nor to the other and rarer form of the disease, dependent principally on a want of muscular contractility alone, from imperfect innervation, have I found this plan less applicable. It might, indeed, be affirmed to be more prompt and effectual under such circumstances. Cases without number have I known, with a permanently distended stomach, and the indescribable wretchedness of this state, which, after refusing to yield to every variety of internal remedy, were very speedily cured by the topical applications to the exterior just enumerated.

Nevertheless, it is the practice of many to meet the earliest indication in the management of the disease, by cleansing the stomach by vomiting, of all crudities, so as to free it from extraneous sources of irritation, and thus prepare the way for the reception and efficient operation of the subsequent remedies. An emetic, however, surely is not always demanded, and might prove even detrimental by an indiscriminate direction. The case, perhaps, to which it is only adapted is such as proceeds from crapulency, or where there are acrid sordes or other vitiated secretions, too abundant to be corrected by simple means;—and, even here, an appeal is not to be made to it, without a conviction that no phlogosis prevails. Determining, however, to resort to it, by pretty general consent, ipecacuanha is mostly preferred as sufficiently powerful, and as, at the same time, exerting, as is thought, some more permanent impression on the disease. Better, however, I think, is salt and water, as more prompt, creating scarcely any nausea, rather exciting, or invigorating than depressing the tone and energies of the stomach.

Co-operating in the same design, clearing the primæ viæ, it is very common to follow up the emetic by an efficient purgative. Most of the preceding remarks apply with equal pertinency to this remedy. It is called for only by torpid or loaded bowels,

unrelenting to the milder laxatives. No preliminary evacuations, however, are ordinarily exacted either way, the general purpose being so to regulate the alimentary canal, as to obviate constipation in any part of it. This last is an important consideration, and in the selection of the medicine some skill is to be exercised. Drastic articles are to be avoided, with the exception chiefly of rhubarb, if it may be so deemed, which has been much and advantageously prescribed.*

The alimentary canal being in a proper state, tonics may sometimes be resorted to with propriety. Before, however, entering on the use of such articles, we ought carefully to ascertain the condition of the stomach. Trivial as inflammatory irritation of it may be, they are inadmissible—and it is one of the greatest errors committed in the treatment of this disease, inadvertently to employ such means.

Too generally, is dyspepsia considered merely as a state of debilitated stomach, and managed accordingly—whereas, in the earliest stages, it is usually associated with much irritation, often followed by inflammation, though so slight, as not always readily to be recognized. Yet there are undoubtedly atonic conditions of the viscus, and it is to these that tonics are suited.

Diversified as is this description of articles, they have almost all been tried, and with various results. The vegetable bitters, especially the gentian, the columbo, the quassia, the hop, and the Peruvian bark have at different times commanded attention. The latter had, at one period, an indisputable reputation, though at present less than, perhaps, any one of the preceding group. It is prescribed in tincture, decoction, or infusion, the last answering best, with the addition of some aromatic, as orange-peel, to

* The following formula is among the best which I have ever tried: R. pulv. rhei, ℥ij.; pulv. ipecac. gr. x.; ol. carui, gtt. x.; Syrup. commun. q. s. Ft. mass. et div. in pilulæ xl. Two or three of these pills may be taken at bed-time when required. They are so gentle in their operation, that they have been quaintly called the *Peristaltic Persuaders*. What is called the *dinner pill*, from its being used to relieve the crapulency of dinners, answers well. It is thus composed.—R. Gum. mastic.; pulv. aloes. āā. ℥j.; pulv. ipecac. gr. x.; Ol. carui. gtt. x.; mucil. gum. arab. q. s. Ft. mass.; div. in pilulæ xx. Combinations of rhubarb, aloes, ipecacuanha, and Castile soap, are however also very good, and, perhaps, not less so, the ensuing mixture, of which an ounce or more may be taken *pro re nata*. R. Pulv. rhei, ℥ij.; Pulv. gentian. ℥j.; Sodæ carbon. ℥ij.; Aq. font. ℔bj.; M. Ft. Infus.

render it more grateful. My own experience, however, does not allow me to recommend the bark, except in the shape of the disease, presently to be noticed, much as has been said about it, and general as were the attestations in its favour. Nearly always it oppresses the stomach and is sometimes rejected. These objections, it is true, do not apply to the sulphate of quinine, which should be preferred, and may be useful. The hop, and quassia, I have given, and not without utility, the former of which, being peculiarly suited to the case of drunkards.

Nevertheless, the mineral tonics evince superior powers, and above all, the martial preparations, of which there are so many, that a considerable latitude of choice is allowed. The sub-carbonate or rust of iron is one much used in powder or pill, with a small portion of ginger, or in the form of an aromatic chalybeate wine. The officinal wine, made of the tartarized iron, is too a neat and appropriate preparation, and not less so, is one prepared by digesting for three weeks, two ounces of iron wire, with the addition of orange-peel, in a quart of hard cider or wine. The tincture of the hydriodate of iron has, of late, acquired considerable repute, and so has a new and very neat preparation, the citrate. Yet, on the whole, I am inclined to prefer the phosphate of iron to all the martial preparations, given in pills of two or three grains several times a day, alone, or in union with the sulphate of quinine.

Great, however, as may be the benefit which sometimes accrues from tonics, they are, for the most part, unnecessary, very often injurious, especially when long continued, and, probably, such cases may be safely, and, perhaps, more advantageously confided to a well ordered regimen, occasionally interposing some gentle aperient. It is to be inferred that tonics, after a trial of a few days, making no favourable impression, are unsuited to the case—to be hence abandoned, and a recurrence again had to the external means formerly mentioned.

The simple and least obdurate form of dyspepsia, is managed in the mode I have described. As the disease proceeds, however, it is marked by more vitiated secretions, and complicated by diverse affections. Cases of this description, particularly where the secretions are excessively abundant and depraved, occur, generally, in drunkards, or very delicate persons, with an atonic state of stomach. To correct these, becomes highly im-

portant, since, by reacting on the case, they occasion altogether a more serious state of things. Yet, while thus addressing palliatives, we are not to lose sight of the main design of eradicating the disease itself, or to forget that they are exhibited in subordination, and as auxiliary to the general treatment.

Among the affections to which I allude, is a *painful cardialgia*, or heart-burn, owing to acidity. The quantity of acid sometimes secreted or otherwise generated by the stomach, is very considerable, and its effects exceedingly afflicting. Besides heart-burn and cramps, I have known it to produce excoriation of the pharynx, the fauces, the tongue, the mouth, the lips, and corrosion of the teeth. Effects of this kind, in various degrees, are not uncommon, and in the late Dr. Poval, of this city, they were to such an extent, that, with a total decomposition of his teeth so that the whole of them crumbled away, he had colliquative diarrhœa, probably from ulceration of the alimentary tube, and ultimately died. The nature of the acid varies in different cases, though according to late chemical investigations, it appears most generally to be either the muriatic or lactic acid, and between which, there is no material difference. Effectual though it may be, at the time, it will not always do to resort to an emetic to remove it. We have happily, however, several other remedies, consisting mainly of the antacid and absorbent preparations. Calcined magnesia, in small and repeated doses, is much employed. The fixed and volatile alkalies, also, answer well, and are administered in different modes, and in the carbonated or pure states.*

Perhaps, however, the ammonia should not be very freely given where the muriatic acid prevails, as a muriate of ammonia might be formed, which is irritating in any considerable quantity. The testaceous articles, as the prepared chalk and oyster-shell, which sometimes are the best correctives, may be objectionable for the same reasons. As a substitute, the ensuing mixture will answer.†

* The following formula I have mostly employed:—R. Carbonas sodæ vel Carb. potass. ʒj; Gum arab. ʒij; Sp. lavand. comp. ʒj; Tinct. theb. gtt. xx; Aq. font. ʒiv, M. More especially is the volatile alkali adapted to those instances where the stomach has lost its tone, as in drunkards or delicate women, and the ensuing prescription is a good one:—R. Aq. ammon. pura ʒj; Magnes. calcin. ʒij; Aq. cinnam. ʒij; Aq. font. ʒvj. M.

† R. Liquor potassæ pura ʒj; Magnes. calc. ʒij; Aq. cinnam. ʒij; Aq. font. ʒvj.

Many years ago, a domestic remedy acquired considerable repute, and which it still maintains. It is *ley*, made by pouring a gallon of hot water on a quart of clean hickory ashes, and half a pint of soot, digested for twenty-four hours. The cure of the late Professor Physick by it, after every other means had failed, brought it into general use, and subsequent trials confirmed its efficacy. It is to be taken soon after each meal, in the dose of an ounce diluted—at any other time it operating disagreeably, and with much less effect. But it is a harsh remedy, managed as it may be, and from its great popularity, is much abused by a too general and indiscriminate application.

Might not the nitrate of silver largely given, be useful? It has a great affinity for muriatic acid, and an inert compound might probably be formed. It is very much in this way that the alkalies operate.

Both the mineral and vegetable acids, such are the idiosyncrasies of disease, will sometimes succeed in these cases when the alkalies have failed. The elixir vitriol I have frequently known to do so, and lemon juice, as well as vinegar, occasionally. It affords me pleasure to find that, in part, this statement is supported by the celebrated Sir Mathew Baillie, of which I was not aware till recently. "Where acidity has been particularly prevalent in the stomach," says he, "I have sometimes found it more effectually corrected by the diluted mineral acids, than by alkalies. Ten or twelve drops of the diluted sulphuric or nitric acid, mixed with an infusion of some bitter, and taken twice a day, will sometimes be very beneficial to this condition of the stomach."

Chewing blanched almonds, or a teaspoonful now and then of wheat bran, swallowed, I have also found serviceable.

2. The stomach may be thrown into painful cramps or spasms, denominated *gastrodynia*, often so violent as to call for immediate relief. Exactly of the same meaning is this term as *gastralgia*, each importing *stomach-ache*, and are used by some of the late writers as equivalent. But they are applicable to very different conditions, which ought not to be confounded. The latter affection is a pure neuralgia, and characterized accordingly—

M. The dose of the preceding mixtures is about a tablespoonful, repeated *pro re nata*.

while the former is more of a colic, occasioned by the acrimony of an immense accumulation of disordered secretions, which never exists in gastralgia. Not unfrequently it is met with in connection with cardialgia and pyrosis. The remedies in the paroxysm are opiates, ether or Hoffman's anodyne liquor, or musk, or the oil of valerian, or some other antispasmodic—of which, however, opium and its preparations are the best. Milk is sometimes very effectual. Two cases, especially, have come under my notice, in which its utility was remarkably displayed, the spasms being more speedily and effectually relieved by a copious draft of milk, than by opiates or any other means. My friends, the late Mr. Dallas, secretary of the treasury, and the late General Williams of the engineer corps, whom I attended for many years, I have again and again seen, cured of this agonizing affection, in a moment, as it were, by swallowing a pint of milk. Not a few other instances could I relate where the remedy proved efficacious.

Distending the stomach with tepid water is serviceable, —and also, sipping small portions of boiling water—the one operating by relaxation, and the other by stimulation of the stomach. Not removed by the foregoing means, venesection may become necessary to relax the spasm, and afterwards topical bleeding, with a blister over the epigastrium.

To prevent a recurrence of an attack, the *hiera picra*, elixir proprietatis, Warner's cordial, the volatile tincture of guaiacum, and the sub-nitrate of bismuth, have been strongly advised in the interval of the paroxysms. The last is in great vogue, and I have reason to believe it merits confidence. An infusion of Peruvian bark has sometimes answered exceedingly well with me, to the use of which I was led by its known efficacy in the case of colicky or *belly-ache* infants, during the first months of existence. Ley, proposed as just mentioned, also, deserves notice—it often affording relief. But on the whole, the most certain remedy I have ever tried, is the mixture for which I am now to give a prescription, it scarcely ever having failed in my hands to eradicate the tendency to a renewal of an attack.*

3. *Distressing flatulency*, from a disengagement of fætid gas, very frequently exists, resulting either from fermentation of the

* R.—Sulph. quin. gr. x.; Carb. soda. vel carb. potass. 3j.; Aq. font. 3iv.; M.—ft. solut.; adde—Tinct. Theb. gtt. xxx.; Ol. cinnam. vel ol. menth. gtt. iv. M.—The dose, a table-spoonful, to be repeated every two hours.

ingesta, or a vitiated secretion of the vessels of the stomach. Coming from the latter source, it is usually larger in quantity, and more distressing in its effects. The epigastrium may suddenly become as tense as a drum, attended rather by an uncomfortable sense of distension than any positive pain. It is very apt to occur at night, the individual being roused out of sleep by it, sometimes with the appearance of incubus, and I have occasionally seen even temporary distraction of mind,—the whole going off after a while by immense discharges of flatus.

Carminatives may alleviate it,—and to do away the disposition to its recurrence, I have seen much good from the elixir vitrioli, repeated several times a day, alone, or with an infusion of bark. Where it follows speedily on eating, with a sense of load and oppression at the pit of the stomach, a pill of two grains of ipecacuanha, taken as soon as the meal is over, does sometimes obviate it.

The pill should be dry and hard, in which state it produces no nausea. Great relief is also derived, in some instances, from the annexed preparation.* The one which follows is still better,† in the dose of half an ounce in a wineglass of hot water. But preferable to all these remedies are the dinner pills, before indicated, one of which to be taken half an hour after each meal.

4. As much does *pyrosis* or *waterbrash* call for attention, and which is a very curious affection, imputed either to a preternatural state of the pancreas, or morbid secretion of the stomach. It may perhaps proceed from the first, though more usually from the latter cause. The vessels subservient to the elaboration of gastric liquor become disordered, and, in consequence, pour out this vitiated fluid to a very large amount. It is the latter form of it, with which we have chiefly to do at present. Where the discharge is very copious, the treatment may be commenced with an emetic, and a recurrence had to it occasionally, when a reaccumulation of the fluid takes place to a distressing degree. Emetics operate probably as much by changing the perverted action of the vessels of the stomach, as by the evacuation of its contents. There are, however, some other remedies after the

* R.—Pulv. rhei ʒjss.; Sem. fœn. ʒj; Aq. bull. ʒiv. M.—et collat,—adde—sacch. alb. ʒij. et mosch. q. s.

† R.—Rad. rhei contus. ʒijj.; Sem. carui ʒss.; Sp. arden. ℥ij. To digest for ten days.

stomach is thus prepared for their reception. The whole of the antacids, such as limewater and milk, the alkalies, the cretaceous preparations, are of this description. But the affection we are told is sometimes, though rarely, attended by a reverse, or alkaline state of the stomach, and then, the acids are to be substituted.

No small share of confidence is also placed in opium. Cullen recommends it, who is so sparing of praise, that what he says of any medicine is entitled to great weight. Yet I have seen no more than palliation from it—and where spasm is connected with the affection, which often happens, it is always demanded. The kino, the acetate of lead, the oil of amber, the spirit of turpentine, and the subnitrate of bismuth are all important remedies, and may be successively tried, if necessary—the last of which, however, is usually the most efficient. Charcoal and the carbonate of soda mixed, in the proportion of forty grains of the first to twenty of the second article, repeated two or three times a day, have proved very serviceable in this, as well as the analogous affections. Creosote, too, has lately had some celebrity under similar circumstances. Both of these prescriptions are, moreover, well calculated to correct the unpleasant taste, and foul breath incident to dyspepsia.

5. It sometimes happens, that such is the irritability of the stomach, that as soon as the food is swallowed, it is returned by a sort of spasmodic regurgitation, vulgarly called spitting up of the food, and technically, *sputation*. Different aspects does the affection present, as well in degree as symptoms,—sometimes only occasional, and exclusively of certain articles,—while in other and more inveterate instances it is continued, and every thing rejected, with sour offensive eructations, and expirations of exceedingly fœtid breath. But what is very curious, we sometimes meet with cases of very long duration, and these undoubtedly not *simulated*, where, though the merest modicum of food is retained, emaciation scarcely takes place,—several of which have come under my own care. There is here, I presume, a condition calling for slight supplies, from correspondent trivial expenditures,—the office of nutrition, so far as concerns the alternate operations of destruction and renovation being nearly suspended. Dreadfully, however, may the nervous system suffer by every

variety of disorder,—hysteria, chorea, epilepsy, catalepsy, or in forms still more fantastic and anomalous.

Moderate acute attacks of this affection are relieved by the antacids, and antispasmodics, previously mentioned, and particularly opiates, with the co-operation of local bleeding, and counter-irritation. The violent and chronic, on the contrary, prove very much the reverse, and may resist all our efforts. But I have known such to submit to bismuth, to strychnine, to veratria, to creosote, to anodyne enemata frequently repeated, and in one instance already noticed, to the introduction of a bougie by which the irritability of the parts was completely overcome. This is a remedy, I am inclined to believe deserving of a fairer trial than it has received. Its utility is confessed in spasmodic strictures of the urethra, and why not in the analogous affection of the œsophagus, &c.? Corrective of the fœtor of the eructations and the breath, is the combination of soda and charcoal mentioned.

6. Disturbances of the heart, *especially palpitations*, on some occasions are extremely violent, even more so than from any organic lesions. They seem to be owing to a peculiar nervous sensibility of the stomach and heart, by which a slight impression from acid or any other irritant made on the one excites the irregular motions of the other organ.

Temporary relief is derived from the antacids, as formerly enumerated, and the antispasmodics, opium, ether, Hoffman's liquor, musk, natural or factitious, the oil of amber, the spirit of turpentine, and the essential oils.

7. *Cephalalgia spasmodica*, or sick headache, one of the most heavy penalties entailed on the sedentary and studious, is primarily an affection of the stomach, owing to the irritation of morbid secretions. It recurs periodically, the pain is always frontal, and particularly over one or both eyes, and is preceded and accompanied by nausea, sour eructations, and other indications of imperfect digestion. The best remedies in the paroxysms are emetics, magnesia, and the fixed and volatile alkalies. Not a little curious is it, that directly opposite means, as the vegetable acids, sometimes prove equally effectual. I have known a tablespoonful of vinegar at once to afford relief, and still oftener the same amount of lemon juice. Early in life I was tormented with the complaint, and the latter was my only remedy. Yet, where there is much vascular action, or great cerebral determina-

tion, we must resort to the loss of blood, generally or locally, and to a sinapism or blister to the nape of the neck. Drinking *hard cider*, every morning fasting, is a popular and very effectual preventive of this, and most other affections of the head proceeding from a dyspeptic state.* But whatever may be its value, it is probably less than that of the sulphate of quinine, or arsenic in small doses and long continued.

As regards *vertigo*, it seldom occurs except in the case of inebriates, and with them it is palliated by the carbonate of ammonia, or by assafœtida, or garlick. Traced, however, to vascular fulness of the head, bleeding and other evacuations will be proper.

Externally, the head is liable to acute, and even excruciating pains, spasmodic or lancinating, attended sometimes by an exquisite *tenderness of the scalp* exceedingly enduring. Though this affection may not hitherto have arrested so much attention as to be accurately described, it has not altogether escaped notice. The plan of treatment pursued in this city, in some instances, after various other means had failed, was, to cut through the integuments, under a conviction that the case partakes of the nature of *tic douloureux*, and that, by dividing the affected nerve, a cure might be accomplished. What was the precise degree of success of the practice, I cannot say, though I suspect it afforded little encouragement, as I do not learn that it has lately been repeated. Early adopting the notion that this affection, whatever might be its precise nature, arises from a dyspeptic condition of the stomach, the only cases of it which have come under my care, I managed chiefly by emetics, and had reason to be entirely pleased with the result. Even genuine neuralgia has been cured, in several instances, by this same practice, most probably when proceeding from gastric irritation.

8. By Richter, it is maintained that many of the *diseases of the eyes*, and particularly *amaurosis*, result occasionally from a disordered state of the chylopoietic viscera, and especially the stomach. Considering it primarily a gastric affection, he directs the exhibition of emetics, and afterwards a combination of tartarized antimony, with some other articles, to keep up a constant im-

* By *hard cider* I mean a preparation of this liquor which we derive from New England. It is essentially different from *sour cider*, or any of the kinds in common use. These instead of relieving the affection have rather a contrary effect.

pression on the stomach. Doubtful as this hypothesis may seem on the first view, I am convinced of its correctness in many instances. The more we study the economy of the stomach, the more we shall be enlightened on general pathology, as well as to the diseases of the head. My practice has afforded me several cases of violent and intractable ophthalmia, that I could trace to a vitiated state of the stomach. Accumulations of bile in that viscus, have long been known distressingly to disorder the head, and affect the eyes, though the more painful and obstinate inflammations of these organs have not hitherto, I believe, been ascribed to this cause. That it does occasionally produce them I am persuaded. Of this, at least, there is no doubt, that they are speedily relieved by vomiting.

9. It is an ancient opinion, confirmed by subsequent experience, that *hypochondriasm*, sometimes exasperated even to furious mania, or depressed into the deepest melancholy, commences in depravation of the chylopoietic viscera, and above all—the stomach. But since, from its importance, it claims a more elaborate examination than I can now give it, I shall postpone the consideration of the subject to another place—and, for the same reason, that of hysteria, diabetes, calculus, and some other affections having their origin mainly in imperfect digestion.

In closing this part of the subject, I have to remark, that the preceding affections, and especially cardialgia, gastrodynia, pyrosis, palpitations, cephalalgia, tenderness and pain of the scalp, may originate in or be kept up by spinal irritation, or at all events, in many instances, that they are most effectually managed by local bleeding and counter-irritation to the upper portion of the vertebral column—or they being, as also happens, more immediately confined to the ganglionic nerves, by the same means applied to the epigastrium. My wish, on the whole, is to inculcate the important fact, that though the series of medicines mentioned are very often of service on these occasions, they are, at most, only palliative, sometimes even aggravatory—and that, with the intention of a radical and complete cure, the other plan of treatment must sometimes claim a larger share of confidence.

Nevertheless, whether in its simplest form or thus complicated, dyspepsia may prove intractable to the means hitherto suggested. The disease, independent of any organic injury, seems to be so fixed and riveted, as to require for its removal some more effi-

cient process. Galvanism, with this view, has lately come forth with great force of authority in its favour, without, however, sufficient discrimination in the direction of it. Efficient at all, it is probably in those states of the disease only, proceeding from a great defect of innervation, it being held to be identical with the nervous influence, or the most efficient stimulus to it. But the trials I have witnessed of it, amounting to no inconsiderable number, were so little encouraging, that I have ceased to employ it.

Experience has taught me that, on the whole, in such instances, most will be accomplished by an alterative course of mercury, taking three or four grains of the blue pill every other night, and a gentle laxative the next morning—one of the very best of which, for the purpose, is a wineglassful of the mixture thus prepared.*

It may suffice to mention, that mercury seems primarily to operate here by changing the condition of the stomach, as well, perhaps, as that of the collatitious organs, on which their depravations depend. Further, let it be understood, that the secondary affections on which I have commented, are by no means uniform concomitants on this stage of the disease, especially to such an extent as they have been represented by me, and that, as previously stated, seldom more than one or two of them are present in the same case, though I have seen the whole in succession, or variously combined.

Dyspepsia by neglect or improper management is prone, as I have said, to exchange its primary state of nervous irritation for that of inflammation, presenting a new aspect, and requiring a variation of treatment.

Conversions of this sort, though in most instances slow, I have known to take place very quickly. Chronic gastritis of a primary character having already engaged my attention, I might pass over the secondary form of it with a reference only, to what has been previously stated. Continuing, however, for a length of time, it may lead to a variety of affections of other and remote organs, which, perhaps, have not hitherto received sufficient notice, and among these, that of the lungs is especially interesting.

Connected with the more peculiar and expressive phenomena

* R. Infus. tarax. ʒiv; Extrac. tarax. ʒij; Supercarb. sodæ, ʒss; Tart. potass. ʒij; Tinct. rhei, ʒij, M.

of gastritis, there is here an irregular, diminutive fever of a hectic type, with suffusions of the cheeks, parched skin, sallowness or duskiuess of complexion, a hard cough, scanty limpid expectoration, heat in the hands and feet, pain in the side or breast, and wasting of flesh and strength. The case, in short, has so many of the features of incipient catarrhal, or, indeed, of tubercular consumption, as to be readily confounded with either of these affections.

An exalted irritation or phlogosis of the stomach or the bowels long endured, may extend itself to the lungs, arising even from sordes, or worms, or indigestible substances swallowed, productive of very serious pulmonary mischief—of which examples are of no unfrequent occurrence.

As long ago as 1805, I was consulted by a young woman with cough, purulent expectoration, hectic fever, and the other phenomena of apparently confirmed phthisis. Being satisfied from the appearance of the tongue, constipation of the bowels, the nature of the discharges when procured, and other phenomena, that the pulmonary symptoms depended on a primary disorder of the alimentary canal, I instituted a practice accordingly, and on the restoration of its healthy functions, the secondary disease entirely disappeared.

In 1820, I was called into consultation with the late Dr. Monges to a boy, who, with most of the symptoms of the preceding case, particularly the copiousness of purulent expectoration, was so much reduced, that the portions of the bones on which he rested had protruded through the integuments in several places. Discovering that his abdomen was tumid, his tongue furred, his appetite capricious and depraved, and that he was subject occasionally to convulsions, I was led to suspect the existence of worms, and, under such an impression, anthelmintics were administered. In less than one week, sixty-eight lumbricoides were evacuated, and from that moment he became convalescent, and rapidly got well.

Many years ago, a case occurred in this city which attracted great attention. The son of one of our distinguished citizens, swallowing a pin, was soon seized with gastric irritation, followed by cough, and other pulmonary affections. These gradually increased till purulent expectoration, and hectic fever took place, leaving no doubt of confirmed phthisis, and a fatal result. But

at this moment of despair, a small abscess arose in the groin, which on being opened, the pin was found in it, and extracted, it having travelled down through the cellular tissue to this point. Convalescence speedily ensued, ending in a perfect recovery. The subjects of these cases are all still living, and in robust health.

We learn from Hildanus, that a woman having swallowed a metallic button, was soon attacked by pulmonary irritation, which eventuated in purulent expectoration, &c. The button, however, was finally vomited up, and she speedily recovered. Much such cases are recorded by Bartholini, occasioned by the ingurgitation by a boy of a swine's tooth, and by Percival, from a nutmeg in the stomach of a girl. Dumeril has more recently noticed another, very analogous, induced by a nutshell retained in the stomach for some length of time.

Do we not know, in further illustration of the same principle, that stomach coughs, so denominated, are very common, and that cynanche trachealis, asthma, and angina pectoris, may be brought on by certain intractable ingesta? Croup, especially, I have several times seen occasioned in children by gastric repletion: and twice by worms, of which, other instances are noticed by the late Professor Barton, and in the foreign journals.

Mostly, in the cases of a chronic nature, the irritation of the mucous membrane of the stomach is extended only to that of the lungs inducing chronic catarrh or bronchitis. But where the tubercular diathesis exists, real plithisis may be developed.

Further, by the play of sympathies, other structures become involved, and particularly the duodenum, the liver, spleen, pancreas, all of which have been found highly affected, displaying phenomena, separately or mingled, with those of the stomach. It is an interesting fact, that sometimes a secondary affection is ultimately more violent in its character, and destructive in its consequences, than the one from which it is borrowed. This is strikingly exemplified in the history of the disorders of the chylipoietic viscera, and above all, as regards the liver, it suffering more than the stomach. By virtue of a law of the animal economy, the primary is usually aggravated by the secondary lesion, till the latter from an increase of vehemence acquires an ascendancy when the former begins to abate, and may be entirely supplanted and cured.

Cases, however, of this description, obviously have no claims

to present consideration—a new disease, in a different part, being produced by this assumption. To the *enduring morbid condition of the stomach*, our attention is to be limited, as the root still sustaining the progeny from it, which, being eradicated, the latter of necessity perish. In relation to these and all other sympathetic affections, this is a distinction to be observed, as a guide to practice. Having, however, already treated of the idiopathic states of gastritis, I must be content by a reference to what has been said, and proceed to present another view of the subject.

It happens, as we have seen, that in the commencement of dyspepsia, there is often a great preponderance of nervous irritation, constituting what I suspect is termed the *irritable or sensitive stomach*, which sometimes endures for a considerable period. This, without passing into phlogosis, or its other more ordinary terminations, may run into the chronic state, and then is entitled gastralgia, in contradistinction to chronic gastritis.

Let me explain this point a little further. Inflammation is a complicated process, consisting of three stages, of which the first is nervous irritation, and the next congestion. But it does not uniformly observe so regular a course, and may especially be arrested in the beginning when simply irritation prevails, which, like inflammation, becomes protracted, with some alteration of character. In this sense it is that gastralgia should be understood, or in other words, as a lingering painful irritation of the nerves of the stomach, independent of phlogosis. Great care has lately been taken to establish a diagnosis between these two conditions, and a summary of the distinctive features I formerly presented.

As of a purely neuralgic nature, I shall hereafter expatiate on this affection in its different stages, when I reach the general consideration of the subject. Enough at present, therefore, may it be to mention that, at first, or while extreme irritability or sensibility prevails, constituting the sensitive stomach—of internal remedies, the most emollient and soothing are to be employed in conjunction with the external topical means already indicated, and when the acuteness of sensibility is somewhat appeased, or the case becoming gastralgic, the prussic acid, the nitrate of silver, the sulphate and oxide of zinc, the acetate of lead, the sulphate of quinine, the preparations of steel, alone or with the opiates or henbane, have considerable reputation, and are the most efficient

means of cure. The preparations of strychnine, also, have recently been much commended, though I am much inclined to suspect, from what I have seen of their effects, more from theory than any positive evidence of their efficacy.

Next, I am to advert to some secondary dyspeptic affections of the stomach, arising from the sympathies of that organ with other parts of the system previously diseased.

Deeply interesting, however, as the subject is, it were now out of place to enter into any details as to the pathological states productive of such effects, the examination of them not appertaining to my immediate inquiry—and, for a similar reason, I shall now merely remark in relation to the cure of the gastric disorder, that it being dependent in its nature, it can only be overcome by the restoration of the organ whence it may be derived to its healthy condition. The same course is to be pursued in relation to any other special cause of the affection, such for example, as hemorrhoidal tumours, it being essential to the cure to remove the direct source of irritation.

As my knowledge, however, increases of dyspepsia, the more am I satisfied that, as a secondary affection, it is rarer than perhaps is commonly imagined. Cases so supposed to originate, I believe are consequent mostly on original gastric irritation, the lesion of the stomach being lost sight of in the subsequent more violent and permanent derangements of other parts.

Let it be recollected, how much that viscus is troubled by the abuse of medicines, and from the introduction into it of every variety of substance, which the wants or caprices of appetite solicit, not to cite other causes,—and the peculiar liability of the intestines, the liver, the spleen, the pancreas, the uterus, the brain, and indeed, every other structure, to participate in its sufferings, we can hardly resist the conclusion. Yet these organs, thus aggrieved by the stomach, return on some occasions in a spirit of retributive justice, the injury they receive from it, with the severest retaliation.

To bring this discussion to a close, it only remains to consider the regimen appropriate to dyspepsia. No part of the investigation is more important, and hence, in treating of it, I shall enumerate all those particulars required in the delivery of precise and definite instructions regarding it. Little will our remedies

avail, unless aided by a regular diet, and a proper attention to some other circumstances of the regimen.

The stomach being the immediate seat of the lesion, and the receptacle of food, nothing, surely, need further be said on the importance of selecting such nutriment as shall be the least offensive to it, and which demands the slightest exercise of its functions in so crippled a condition.

To the very interesting experiments, and observations, in some other respects, of Beaumont, on the comparative digestibility of alimentary substances, I think, too much importance has been attached. They were, in the first place, made on a somewhat diseased stomach, or one, at least, with an external opening, created by a wound, and secondly, restricted to a single individual. Now, it is highly probable that the function was materially influenced by the lesion of the viscus, and we are entirely aware, how infinitely diversified it is in different persons, and indeed, in the same persons, at different times, owing to many circumstances. Conclusions of this sort, can have claims only to regard when derived from data on an extensive scale, and even then, we shall do, I apprehend, little more than reach a nearer approximation to certainty.

Nor is it true, that the most digestible articles are always the most proper, as is commonly supposed. The contrary sometimes happens, or the blandest, though less tractable to the powers of the stomach, are better suited. Thus, among other examples, the mucilages, from their inirritative qualities, may be singularly appropriate, slow and difficult of digestion, as they are proved to be. But, inasmuch as dyspepsia, in its progress, varies, the diet must be accommodated accordingly.

We are first to notice what is adapted to the earliest stage of the disease, where extreme nervous irritation prevails, with an intolerance of aliment, except the very mildest. Little else will be endured here, than barley or rice water, or rennet whey, or thin gruel, sago, and such like articles. Cases of this sort, however, are rare, and when they do occur, may be soon brought to bear a more substantial diet. Then, for the morning and evening meals, milk is to be preferred.

It will itself often cure cases, which have proved very obstinate. But it is sometimes required, that the patient live solely upon it, not having even bread allowed him. Milk is applicable

to nearly all the varieties of dyspepsia, and its complications. It relieves gastrodynia, pyrosis, cardialgia, and palpitations. But it is objected to it, that it disagrees with many persons. That there are idiosyncrasies, forbidding its use, is very conceivable—though I have seldom met with such instances. It may be puked up and turned, which ought not, as is generally thought, to discourage us from further trials. The first step in the digestion of such fluids is coagulation. What, on the whole, was said long ago, by Cadogan, is nearly true;—that milk is most proper, when it appears least suitable—having the power of correcting the morbid states of the stomach, and hence, remedial in its preliminary effects. Nevertheless, it may be inadmissible, especially when it accumulates in large masses of a cheesy nature, productive of gastric oppression, or unrelenting obstruction of the bowels, with the alarming consequences of such conditions.

Three very remarkable instances of the kind, I have met with. Many years ago, I had brought to me a mass, which in length, breadth, lobulated structure, and general aspect, so closely resembled the pancreas, that it might, at a glance, have been mistaken for that organ. On tearing off a part of the integument, which was a coating of coagulable lymph, I found the interior to consist of compact cheesy matter. As an explanation of the phenomenon, it was stated by Dr. Tydiman my informer, that several months before, on a journey from South Carolina, his coachman in whom it occurred, drinking copiously of milk, was soon after seized with colic, which though relieved, so many of the symptoms of hepatitis occurred that the case was treated under such an impression. By a violent effort of vomiting, the mass was brought up—convalescence commenced, and an entire recovery ultimately took place. The preparation is in the museum of the Pennsylvania University.

Not long afterwards I saw, with the late Professor Physick, a lady, who for the cure of dyspepsia, went to the country, where she lived for upwards of three weeks entirely on milk. Constipation speedily ensued, which gradually increased till it became utterly unrelenting, and she was brought to the city with an enormous distension of the abdomen, and as much pain as in the severest labour. By a scoop I removed an immense mass of cheesy matter from the rectum, and subsequently by enemata

and purges it continued to pass away till the aggregate amounted to six or eight pounds—as we conjectured.

More recently I was called to a little girl of four years of age—in very much the same situation, who had been placed for some time on a strict milk diet. Being told that an enema could not be administered from an insuperable impediment to the introduction of the pipe of the syringe, I made an examination, and discovered the rectum loaded with the same sort of cheesy matter, of which I am sure, more than a pound must have ultimately escaped. Examples very similar have been reported by Bartholini, Elliotson, and other writers.

As a substitute for milk where it, for any reason, cannot be taken, cocoa may be directed, or chocolate, prepared with boiling water, which is to be permitted to become cold, then to skim off the oily and feculent matter, collected on the surface, re-boiled and poured on cream and sugar. Even better than this, perhaps, is a very light and agreeable preparation of the article vended in this city under the title of *anti-dyspeptic* chocolate. Disgusted with these articles, the patient may take black tea. Green tea should rarely be admitted, and never without its having been previously ascertained to agree better. Coffee is generally denounced as still more pernicious, and when permitted at all, the weakest preparation of it is enjoyed, or if otherwise, to be diluted by a large addition of milk, the whole of which is founded in mistake. Coffee, strong, clear, and with little or no cream, is a most delicious cordial, agreeing well with many cases of atonic dyspepsia, and the trash usually directed, nauseous, relaxing, and mischievous.

The articles for dinner, are game, or white poultry, or beef or mutton. Nor veal, nor lamb, nor geese, nor ducks, nor fish, are proper. The first two of these prohibited articles are objectionable, from the well ascertained fact, that all young meats, owing to their fibrous and stringy texture, are less digestible, and the rest on account of their grossness, or otherwise offensiveness to the stomach.

Every variety of soup is pernicious, as liable to sour. The essence of beef, however, is allowable, and where the stomach has lost its tone, we direct a modicum of salted or smoked meats, thoroughly boiled, which are particularly useful in the weakened

stomachs of inebriates. The same may be said of some of the condiments, as Cayenne pepper and mustard.

Little vegetable matter should be taken, the best of which is rice, or the roasted potato. There are, however, some exceptions to this rule. Cases occur where a vegetable seems to answer better than an animal diet. But such are exceedingly rare. Leaven bread stale, and without butter, is to be preferred. Crackers, usually directed, are apt to oppress. Bran bread, as it is called—made of unbolted flour, is sometimes useful, particularly by keeping the bowels open. It seems, however, to operate mechanically, by the irritation of its indigestible husks, and should, therefore, be withheld, whenever there is the least phlogosis or increased sensibility, in the *primæ viæ*. Great injury I have seen from the too indiscriminate use of this article, which is not certainly always, as is pretty generally supposed, in the doggerel rhyme of an old poet,

“——The household bread,
Curative of the aching head,
And constipation's other ills,
For which folks swallow salt and pills.”

Cakes, as well as toast, either dry or otherwise, as usually prepared, are improper. To the former there may be, perhaps, a single exception. Cases I have met with among our southern and western people, with whom the cake made of Indian meal agreed better than wheaten bread, probably from their being more habituated to it. As to dry toast, I wish to be explicit, since an opinion almost universally prevails opposed to the one I have expressed. But there is little doubt of my being right. Generally, the slice is thick, and very imperfectly toasted, in which state it is so disposed to fermentation, that in a few minutes it becomes sour to the smell and to the taste. Better made, it may be wholesome. Even this, or bread in any shape, is sometimes inadmissible.

Nearly every species of dessert is detrimental, including fruits, nuts, &c. Yet I have known ice creams beneficial, or at least harmless, taken in the intervals of the regular meals.

The stomach has been pronounced by a very sagacious observer, Sir William Temple, to be, in one respect, like the school-boy, always doing mischief when not employed. This short

aphorism contains a vast deal of practical wisdom in relation to dyspepsia. By eating often, while the system is adequately nourished, the stomach escapes oppression. Lord Bacon somewhere tells us, that meeting with a very aged man, hearty, and robust, he inquired of him what were the habits by which he attained such longevity, and with the vital forces so singularly preserved. "Never," he replied, "have I eaten or drank, when I was hungry or thirsty, by which means, any excess in either was avoided, and I always comfortable, escaped the numerous and fatal diseases arising from debauchery, and intemperance." To this very general rule, there may be occasionally an exception. The stomach being irritable, or too much fatigued, to perform its functions, an entire intermission of food, for a longer time, may enable it to recruit its energies, as is illustrated in the effect of rest on some other organs. We have here an instance, where "all work and no play" may not answer.

It is known to me, that the propriety of the precept I have cited, and endeavoured to enforce, has been contested. By eating frequently, it is said, chymification and chylication, which follow each other in succession, are interfered with, and that such an interval should be allowed between taking food, as to enable the first of these processes to be completed before the second commences. But the allegation is preferred on false premises. From the most authoritative experiments, it appears that these two operations are simultaneously performed, or as quickly as chyme is prepared, it passes into the duodenum, to make way for a fresh layer of food to come in contact with the sides of the stomach, as well as to be more exposed to the action of the gastric juice.

Greater force exists in the objection, that by this practice the habit of the stomach is interrupted, and from so wide a deviation mischief must ensue. But we are not speaking of the sound condition or the usages of this organ under such circumstances. Dyspepsia deranges every thing connected with the functions of the stomach, and we are called to view it thus diseased rather than physiologically. Not now to decide peremptorily on the effect of more frequent meals than society has established, I will only ask, how can adequate replenishments of aliment be attained, in this case, except by such repetitions of it as I have proposed where no large quantity is endurable at once?

Be it as it may, however, the amount of food must be small.

Error in *quantity* in this respect is, perhaps, even of more importance than error in *quality*. It has been well remarked, that "the weakest stomach may digest a *little* of any thing, and the strongest *much* of nothing." As to the sum of solid animal food to be allowed, this must be accommodated to the circumstances of the case. Not more than an ounce will be borne by some stomachs at a time, while in other instances, several ounces may be tolerated. The best rule as to quantity, as well as quality, is the absence of all uneasiness. Consciousness of any thing in the stomach, affords evidence of its disagreeing. Digestion, when salutary, diffuses agreeable impressions over the system, without any positive sensation in the stomach itself. But we cannot always trust this matter to the patient himself. Definite instructions are then to be given to the attendant, and to attain absolute precision, in certain delicate cases, the food should be weighed.

It is a predominant opinion, that eating in the evening is very prejudicial, and hence prohibited. No doubt the digestive energies, in common with those of all the great functions, are impaired at this period. The system is worn down, and seeks repose as the natural restorative. Concurring in the general denunciation of *suppers*, I must still insist that the rule excluding food altogether, cannot unexceptionably be received. Cases I have seen where exhaustion was considerable, the stomach without tone, and annoyed by the harassing sensations of emptiness, with nervousness and morbid vigilance, that were relieved by a little food at bed-time, and even at a later hour, when such a state of wretchedness came on.

As to diet, however, some more precise directions are demanded.

1. Do not mix the food, since, exactly as it is simple, so is the facility of digestion, and the absence of uncomfortable consequences. That a contrary doctrine, deduced from some experiments, is maintained, I am aware. But these were made on a healthy stomach, and whether true or false in that relation, the fact is unquestionably otherwise as to the disordered state of the viscus.

2. Chew the food well, and slowly, that it may be thoroughly imbued with saliva, on which account it is better to take it in large pieces than mince it, except mastication cannot be performed from the want of teeth.

3. Drink moderately at meals. They who indulge freely, or abstain entirely, err alike in this respect, as a certain degree of fluid is promotive of digestion. The celebrated Mr. Abernethy differs from me in some degree on this point. He thinks that no fluid should be allowed while eating. Being questioned as to the regulation of diet by a female friend of mine, with his usual oddity, he replied to her: "Live, madam, as a cow—eat your food—take a drink afterwards—lie down, and go to sleep. Did you ever know a cow to have dyspepsia?"

4. Exercise is not to be taken for an hour or two following a repast. We should rest, though not sleep—the one state advancing, and the other retarding the digestive process.

5. Nor is it less important to postpone eating after exercise where it has been considerable. This, though it may sharpen appetite and perhaps invigorate digestion in the robust, has a contrary tendency in the valetudinary—the stomach, under such circumstances, pretty uniformly sharing in the general enervation from fatigue.

6. But, above all, take care that the food be well cooked. More important is this than the nature of the article itself. There is scarcely any thing which may not be so prepared as to render it digestible—and, conversely, by negligence or the want of skill, every thing may become pernicious. The predominant taste in this country, derived from our ancestors, the British, prefers imperfectly dressed food. Bloody effusions may be constantly seen to issue from fresh meat on our tables, when carved—the salted and smoked are served up dry and hard, and vegetables too raw. But, what is worse, it is intentionally so, since in this state, while food is deemed more palatable, it is believed to be also more wholesome. Now the great purpose of cooking is to perform that for which the teeth are designed, or to co-operate with them in breaking down the texture of food, so as to make it easier of reduction to a pulp by the powers of the stomach, and to accomplish which, it must be thoroughly dressed. Boiling or stewing, particularly the latter, is most effectual to this end, though in broiling or roasting, a greater amount of the juices of meat is retained—at the same time it is more savory and nutritious, and may be made very tender. The worst of all modes is frying, from the impregnation of the meat with extraneous oils, the whole becoming empyreumatic, and the meat tough.

The appetite being sometimes feeble, it is necessary to excite it. With this view—

1. Keep from the patient the knowledge of what he is to eat, and surprise him with something inviting.
2. Do not disgust him by the smell of meat. To avoid this it may be cold, and which indeed is usually preferable.
3. The dishes should be small. It often happens that we shall eat with avidity of a nice little bit, when we would loathingly reject a large joint of meat.
4. The food ought to be frequently changed.

“Occidit miseros crambe repetita.”

OVID.

“The same stale viands, served up o’er and o’er,
The stomach nauseates.”

WYNN.

This occasional variation renders it more attractive, and at the same time, promotes digestion. Confined to one article, however wholesome, the stomach will soon languish and fail to derive nutriment from it—suffering, like the lungs, from the continued inhalation of the same air, the respiratory process under such circumstances becoming uniformly less actively performed.*

5. As of the last importance, the mind should be preserved tranquil and happy at the moment of the meal. Disturbed by anxiety, fretfulness, anger, or any painful emotion, even the reception of unpleasant intelligence, the inclination to eat, at once ceases. By the Poet of nature, this was understood, and well expressed.

——— “Read o’er this:
And after this, and then to breakfast
With what *appetite* you have.”

Of drinks, I believe, on the whole, water is best. Malt liquor, either sound old porter or ale sometimes answers, though it more frequently disagrees. Wine, however pure, is for the most part pernicious, generating acidity, which induces irritation. Exceptions, however, are occasionally to be met with, in states of extreme atony of stomach, and general wretchedness, and where

* Johnson on Dyspepsia.

it seems to be instinctively called for, it proves cordial, and may be even more permanently useful. It is to such that St. Paul's advice to his friend Timothy is just, as well as kind, "to drink a little wine for thy stomach's sake, and thy other infirmities." Most of the highest authorities concur with the Apostle, and from which I cannot dissent. The best wine is Sherry or Madeira. Port, which from its tonic properties, is occasionally recommended, constipates and proves otherwise pernicious. Weak old brandy or whiskey and water are also beneficial under like circumstances, and the previous habit of using them having prevailed, they must be conceded. But whatever is granted, let it be sparingly. Deluging the stomach defeats all our purposes, by diluting the gastric liquor, and so distending the viscus as to prevent its contractions, thus weakening or destroying the agencies, by which the digestive process is executed.

As detailed, such are the leading precepts to be observed in dietetic management of genuine dyspepsia. Not the least cause of perplexity in regard to their just application arises from the apparent similarity of cases, dependent on different conditions of the stomach.

Thus, among other instances, whenever that organ is irritable or sensitive, it exhibits so many of the phenomena of phlogosis, that the two states may be confounded. Now the former state may be owing either to inflammatory excitement, or a total absence of it, extreme weakness—and as the one or the other state prevails, so must the diet be adapted,—in the former to consist of bland fluids only, and in the latter, particularly when of a gastralgic nature, of solids as exclusively. Blunders on this point have been repeatedly witnessed by me, and where on an exchange of a mild, and sparing mucilaginous, for a nutritious animal diet, or the converse, according to circumstances, very salutary results took place.

Constantly have we reports of the most discrepant sorts of nourishment agreeing with dyspeptics—partly to be referred to individual idiosyncrasies, though much more to the pathological state of the case.

The late Professor Wistar informed me, that he had for a long time ineffectually endeavoured to relieve an opulent merchant of this city, who was very speedily cured by drinking copiously of *sour beer*, such as had been utterly condemned by the brewers

as spoilt and unsaleable. An eminent lawyer got well of a very inveterate attack, previously attended by the late Professors Rush and Physick, by living exclusively on raw turnips, and the latter was in the habit of relating another case, where raw cabbage produced the same effect.

During nearly a whole winter, I had under my care, in consultation, a most distressing attack of the disease, proving utterly intractable to the regular remedies, which the next summer promptly disappeared by the person subsisting on the *morilla* or *sour pie cherry*. Nor is this the only instance of which I have heard of cures ascribed to tart, and perhaps unripe fruits of several kinds, and one especially from Professor Hodge, to apples.

Not many years ago, I saw with Professor Jackson, a gentleman from North Carolina, who after baffling all our efforts, recovered on a diet of fat *roasted pork*,—and a second with Dr. J. Rhea Barton, in an advanced stage of the affection, with a state of stomach so irritable that nothing we directed could be retained, which immediately yielded to *wheaten mush* and *vinegar*, largely and eagerly consumed.

It has been told me by Dr. William Harris, that one of our distinguished citizens, very long indeed a victim of dyspeptic infirmities, became very comfortable by the substitution of tough half baked bread in place of other food. From a lady to whom I was called last winter in consultation with Professor Hodge, suffering as severely as any one I ever saw in the disease, she being actually unable to retain any thing, and consequently had become extremely weak and emaciated, we learnt that she was cured of a similar attack, the preceding summer, by subsisting on *green Indian corn* and *tomatoes*. Continuing in the same condition unmitigated until the return of these articles the present season, when again reverting to their use, the same happy effects were experienced—and persevering to live on them in the dried state, she, as I understand, has had no relapse. The individuals in each of these instances were driven to such extraordinary selections by an instinctive propensity.

It has occurred to me, from observing these singular effects, that sometimes, the least digestible articles might operate beneficially by setting up a new action subversive of that on which dyspepsia depends. This is the *modus operandi* of many of our

medicines, particularly the stimulants and tonics, and why should not alimentary matters, equally intractable to the resources of the stomach, occasion similar results? The conjecture, however, is thrown out more as an explanation of the anomaly, than as a suggestion to be carried into practice.

Nevertheless, some regard should be paid, in the regulation of diet, to the taste, habits, longings and other peculiarities of persons, as well as to their own experience, as to what agrees best with them, though at the same time, we must be careful not to be led astray by the force of their propensities. The common adage, that every man of forty, who is not a fool, becomes, in this respect, his best physician, is not true. They very often deceive themselves, and impose on us, by the lusts of appetite, or by a repugnance to submit to our discipline. What drunkard, for instance, would not declare that whiskey agreed with him, and where is the gourmand, that does not sigh at the loss of his ample meal?

National tastes, to a certain extent, are likewise to be consulted. Thus a Frenchman would turn with disgust from an article, which delights the palate of an Englishman, or reversely—and the same sort of predilections and aversions, are found among the natives of different sections of our own country. The Virginian doats on his bacon and greens—the Yankee on his codfish and potatoes—and the Pennsylvanian on his sourcroust and goose, each, perhaps, wondering at the singular preference of the other for such dishes.

To yield to a certain extent to the likings and dislikings of the patient, I say, may be proper. The food at which the palate revolts, cannot fail to be ill received by the stomach, and probably prove very offensive to it,—while on the contrary, what is eagerly solicited or relished, may be cordial and invigorating to the digestive powers.

Concluding this portion of our subject, I wish it to be distinctly understood, that the dietetic precepts which have been delivered, are not absolute, or of universal applicability. Not more diversified, scarcely is mankind in the expression of countenance, than in constitutional modifications. The term salutary, or otherwise, in regard to his nourishment, is relative, in a degree, and experience abundantly teaches, that an article very harmless to one,

may be to others directly the reverse. "To assert," says an old writer (Van Swieten), "a thing to be wholesome without a knowledge of the person for whom it is intended, is like a sailor, pronouncing the wind to be fair, without knowing to what port the vessel is bound." My object has been to generalize in framing this set of instructions, and to the discrimination of those for whom they are intended, must I confide the accommodation of them to special exceptions.

In some of the more obstinate forms of dyspepsia, much advantage is derived from remedies addressed to the system generally. The warm bath, taken twice or thrice a week, is useful, and so has the cold bath proved in other states of the disease. On the same principle frictions, especially with fine salt, over the entire surface are serviceable. This is now much practised by those who are desirous of preserving or regaining the bloom of youth. As much so are the rubbings with the hair glove, a newer contrivance. The skin in the protracted cases of dyspepsia, is dry, and with a very feeble circulation. Whatever, then, is calculated to reinstate its healthy functions must not be overlooked.

Exercise is so highly useful, and above all, riding on horseback, that it may itself cure the disease. My remarks, of course, apply to the atonic dyspepsia. Under other circumstances, rest and quietude, till the phlogistic diathesis is overcome, are scrupulously to be observed.

Too little attention is here commonly paid to clothing. No fact is better established than that of the reciprocal and most intimate consent between the cutaneous surface and the alimentary canal. Warmth of the skin ought hence to be maintained—and for this purpose, flannel is to be worn at all seasons. We are aware of its utility in the bowel complaints, and it is not less so in those of the stomach. Extreme sensibility to cold existing, direct a waistcoat and drawers of buckskin.

I have previously remarked how apt cold feet are to induce dyspepsia. With the slightest predisposition, they seldom fail to excite, or, if it exists, to exasperate the disease. As precautionary, worsted stockings with buckskin socks should be worn, and something irritating, as Cayenne pepper, may be applied to the soles of the feet. This is both a preventive and curative expedient, and particularly of the sympathetic affections of the head, as cephalalgia, and also of depraved vision. Even a case of in-

cipliant gutta serena I have known to be cured by irritations constantly kept on the soles of the feet.

It should not escape notice, that the want of sleep and inquietude at night is among the most uniform and harassing incidents of the disease, exhausting strength and exasperating the nervous derangements. The use of opiates is objectionable from their constipating effects, though the acetate of morphia, endermically applied, sometimes succeeds very well. Nervines of every description, such as camphor, the oil of valerian, Hoffman's anodyne liquor, are resorted to, though for the most part unavailing, and are pernicious to the stomach. The most certain relief is afforded by rising in the morning early, taking exercise during the day, a stimulating pediluvium on going to bed, and very frequently by a dose of the super-carbonate of soda, or of ley prepared as formerly mentioned.

In the event of other measures failing to cure dyspepsia, a trial of some of the waters of our mineral springs should be made.

Those of the best repute are of New York, Pennsylvania and Virginia, and many are the instances of their beneficial and even restorative effects. Excellent as they all are, the latter, however, are preferable, as well from superiority of climate, as the greater diversity of qualities. Embosomed in a mountainous region, where the heats of summer never penetrate, and from which the diseases of the season are excluded, there is, within a very limited space, a group of some ten or fifteen of these waters of decided activity, including natural baths of every gradation of temperature and difference of medication. Not a little is to be ascribed to their medical properties, though, in a just appreciation of them, we must also include the advantages of the change of scene, a purer air, a more cheerful society, and the interruption of pernicious habits and associations. It is in these modes that a long journey over a delightful district of country, or a visit to a European metropolis, or a residence in some of the genial climates of that section of the world proves so effectual.

The preceding observations plainly relate to the reduced shapes of the disease. Excitements, on the contrary, are to be abstained from, under other circumstances of dyspepsia, and I am quite sure, from my own experience, that every description of mineral water is prejudicial and inappropriate. Ever doing good in the active state of the disease, of which we hear occasionally, it is by

the revulsion created on the bowels, the kidneys, or skin or some other emunctory—a principle too uncertain, as well as dangerous in its tendencies, ever to be hazarded, or, at least, adopted as a rule in the treatment of such cases.

Lastly, in those instances, where the moral and intellectual condition is deeply concerned, important is it to endeavour its rectification. Much of what has been previously said, is conducive to this end. But something further may be done for its relief. Let the attention of the patient, which is generally engrossed by the constant study of his sufferings, real or imaginary, be diverted by engaging in some active pursuit, and where it is practicable, to go into society freely, and share of whatever it affords innocently to recreate or amuse. The morning should be appropriated to actual business of some kind, so urgent as not to be neglected, and the evening to social relaxation. “Be not idle, be not solitary,” is the leading precept enjoined on such persons, by old Burton in his memorable work on the anatomy of melancholy, and all experience goes to attest the value of it.

But what will all I have said accomplish, unless the remote and exciting causes of the disease be carefully avoided. Let it, therefore, be imperatively inculcated on a patient, that he is altogether to renounce those habits and pursuits which, directly or indirectly, may have contributed to the production or maintenance of his case. If he be intemperate, he is to become sober. If he uses tobacco, opium, or any other baneful article, he is to relinquish it: if he be luxurious, he must institute a reform in his scheme of living: if he be indolent, he should be awakened to enterprise: if he be studious, he is to abandon the midnight lamp: if he be afflicted, we must soothe his misfortunes by holding out to him the promises of hope and the gilded prospects of the future.

These cases are often very troublesome, and trying to the patience of a practitioner, from the great predominance of hypochondriasm. Exceedingly querulous, from the very nature of the disease, the dyspeptic is eternally complaining of the most preposterous feelings, and is apt, after a time, to exhaust our benevolence and sympathy. But this is wrong. Whatever may be the extravagance of his conceits, they arise from the intimate dependence of our moral nature on our physical constitution—and being the result of diseased action, become legitimate objects of medical care. Treat him therefore kindly, and even with ten-

derness. Encourage him, to the last, with the expectations of cure—and never, on this or any other occasion, should a patient be consigned to the horrors of despair.

"Sunt verba et voces, quibus hunc lenire dolorem,
Posis et magnam morbi deponere partem."

HOR.

"The power of words, and soothing sounds appease
The raging pain, and lessen the disease."

FRANCIS.

ON
SOME OF THE DISEASES
OF THE
INTESTINES.

THAT portion of the digestive tube, denominated the intestinal, is scarcely of less importance than the stomach itself, exercising the same sort of influence over the general organization or economy, and from its vast extent, and intimate connections, is exposed to numerous and infinitely diversified morbid affections of the deepest interest, in whatever light they may be surveyed. Of these, the first in order of examination is,

ENTERITIS, OR INFLAMMATION OF THE BOWELS.

In reciting its history, we have to encounter the same embarrassment experienced in regard to gastritis,—it being also a simple phlegmasia or local affection, or complicated with general febrile disturbance. My design is to contemplate it as much as possible in the former light, avoiding what might be said of it under the head of fevers, and especially in relation to the doctrine of *dothinenteritis*, on which I have elsewhere delivered my sentiments, and am now to pass over the subject with a rapid sketch only, since I shall have to review it again, and minutely, in treating of diarrhœa, dysentery, colic, cholera, and other modifications of essentially the same pathological condition. Till of late, it has been customary with writers in delineating this disease, to view it as one common affection of the whole intes-

tinal canal, without any reference to the portions of it concerned, or the tissue in which it may be more immediately seated. These are circumstances, however, which vary the case materially, and as involving some practical results, should, independently of any nicety of pathological distinction, claim attention. The fact, really is, that in attacks so violent as to constitute what is usually deemed acute enteritis, it mostly happens that the inflammation is not restricted to any one tissue. Commencing as it generally does in the mucous, or should it conversely in the serous, which is much less common, it involves in its progress ordinarily, the other coats, so as to form a case embracing the whole. An exclusive mucous phlogosis is exhibited, perhaps, only in mild diarrhœa, and even here, it is among the rarest of events. That the contrary has been maintained, I am aware, and indeed, to such extravagance is the notion now carried by some, as altogether to disregard every other than those of the mucous membrane, in the discussion of the affections of the bowels. But surely this is wrong, the evidence of symptoms, and the phenomena on dissection, concurring to establish an opposite conclusion, or the very general involvement of the whole of the tissues in a greater or less degree, primarily or ultimately.

The course I mean to pursue is, first, to describe enteritis generally, and then to notice it in the subdivisions, and particular characters it receives from the considerations to which I have alluded. No disease, perhaps, exhibits a greater variety of aspects than enteritis, as well for the reasons just mentioned, as from the gradations of severity, and extent of complications to which it is liable. But taking the average of cases, there are with prelusive chilliness, or cold sensations, sooner or later followed by some febrile reaction, clammy mouth, furred tongue, internal heat, pain occasionally dull or gravative, though oftener acute, lancinating, or spasmodic, especially around the umbilicus, usually increased by pressure, attended by nausea or vomitings, purgings or constipation, according to the location of the phlogosis, and occasionally by some embarrassment of urination, much thirst, or sometimes none at all,—the circulation rather depressed, or full and slow, or hard, corded, and accelerated, with strong pulsatory sensations in the aorta;—the skin hot and dry, of the belly, while that of the extremities may be the reverse;—extreme anxiety and restlessness, and not unfrequently a tendency to delirium.

These symptoms, or some of them at least, in diverse combinations, are progressively increased, and at the same time, there is in some instances, more development of certain secondary affections, among which are those of the brain and liver, or other of the collatitious organs. The case, however, having passed over the stage of active phlogosis, we shall perceive a gradual decay of vital energy, marked by a feeble or scarcely perceptible pulse, collapsed surface, dewy perspiration, low, muttering delirium, haggard or contracted countenance, relaxed muscles, meteorism or distension of the abdomen, singultus, puking or purging of albuminous or mucous matter, or of a dark, thin, and often of a granular or flocculose fluid, with hurried and laborious respiration. The tongue, at this period, may be either heavily loaded at the root and centre, with florid tip and edges, or more generally red and dry, or even chapped, in which respect there is considerable difference.

As described, such is ordinary enteritis. But on some occasions, where reaction does not take place, we have, throughout its career, the manifestations of extreme prostration of the forces of life. Not to anticipate remarks reserved for the future, it may now suffice to state, that while in some instances it resembles very much the advanced stages of the inflammatory form of the disease, it more frequently imitates the typhoid conditions of dysentery.

Cold, variously applied, is the common cause of this disease, and next to it perhaps, are lodgments of irritating ingesta, or obstinate constipation, though it may arise from many other causes, and, indeed, all those enumerated as exciting gastritis.

Efforts recently have been employed to indicate the differences in the inflammation of the bowels, as influenced by the circumstances previously mentioned, and though in many instances the criteria will fail, they ought to be known from their sometimes serving the purpose. The upper portion of the tube being phlogosed, there is ordinarily constipation, and the contrary as regards the lower. Not a little, however, depends on the tissue engaged. Thus, where the muscular coat is exclusively so, in any part of the tube, constriction of the bowels, with retention of their contents is the consequence, and the reverse, when the mucous surface is only implicated. But we have further distinctions.

Duodenitis is designated by most of the symptoms of inflamed

stomach, vomiting, epigastric oppression, puffiness, and occasionally by an icterose aspect, as we see more particularly in what are termed bilious autumnal, and yellow fevers, where the stomach and duodenum are much more affected than the liver, or indeed any other organ or structure. Even confirmed jaundice, a fact which I claim first to have published, is sometimes connected with this pathological condition of the upper portion of the digestive tube, though oftener with the chronic forms of it.

It is confessed that we have no signs by which *jejunitis* is distinguishable, owing probably, to the comparative exemption of this intestine from inflammation, and when attacked, it is in combination, and not separately.

The phenomena supposed to be among the most characteristic of *ileitis*, are the want of acute pain, and less tenderness, and nausea or vomiting, than in duodenitis. But this is not universally true, these symptoms, in colic especially, being in the highest degree of exasperation, and are by no means seldom met with. Greater confidence, I think, is to be placed on the position of the pain, and sensibility on pressure, which are around the umbilicus, descending however, much lower, or into the hypogastrium, with difficulty of urination—very early meteorism, and above all, the absence of those circumstances denoting the lesions of the superior and inferior sections of the bowels.

Excepting the location of the pain in the right iliac and inguinal regions, attended by some tumefaction at these points, I know of nothing very expressive of an inflamed cæcum.

Characteristic mainly of *colitis*, is a diffused pain and tenderness over the abdomen, though particularly in the direction of the arch of the colon, a sense of weight in the pelvis, frequent purgings of vitiated matter, indicative of defective fecation, resembling the discharges in diarrhœa or dysentery. Tormina and tenesmus, with sometimes hæmorrhoidal irritation, are probably the least equivocal signs of *rectitis*.

Enteritis of the several sections of the tube is thus represented. But I must repeat, that in its distributions, it is hard of recognition, and probably does not admit of being clearly designated with any sort of uniformity. But there are some claiming to do it, who if they really possess the power, I can only say, that they have a degree of perspicacity, which I have never witnessed in others, or can possibly arrogate to myself.

It was the habit of the late Professor Shippen, of facetious memory, when demonstrating the small intestines especially, having pointed out their ordinary divisions, to say, that these were arbitrary, and that, pulling at the gut, when we got tired calling it duodenum, we might call it jejunum, and then ileum. From the want of definite diagnostics, I apprehend that we are compelled to pursue pretty much the same course in our pathological consideration of this structure.

The phenomena of enteritis are modified by other circumstances. As in gastritis, the mucous and cellular membranes being alone affected, the pulse is comparatively slow and soft, there is scarcely any pain, the secretions are augmented, and variously changed, with a heavily coated tongue, while an affection of the muscular fibres is denoted by the predominance of spasm—and of the peritoneal covering, by lancinating pain, attended by a more wide spread tenderness, whitish furred tongue, and in each of the latter instances, by a small, corded, accelerated pulse.

Nor, perhaps, is it always easy to distinguish enteritis from the inflammation of the stomach and some other parts. The analogy between it, when seated in the upper intestine, and gastritis, is so close, that many of the recent writers confound them under the title of gastro-duodenitis. But, though usually united, they may certainly have a distinct existence. By Andral it has indeed been actually demonstrated, and, in this state of separation, are sometimes susceptible of recognition, by a careful collation and comparison of their respective symptoms.

Nearly the same may be said of pancreatitis and hepatitis, each of which may so simulate the phlogosis of the small intestines especially, as to demand a similar scrutiny of their features. Less perplexing is the discrimination of diarrhœa, dysentery, cholera, colic, and *parietal* peritonitis, as will be seen by an examination of the characteristic signs of these diseases.

Expressive of a favourable issue in enteritis, in its several locations, are the gradual subsidence of pain, the yielding of the bowels, if constipation has existed, with natural or improved stools;—quiescence of the stomach and of the cerebral and nervous system;—a more equable pulse, softening of the skin, and warm vapoury diaphoresis. Conversely, should the pain suddenly cease, with a languid circulation;—cold surface;—clammy sweats;

—collapsed countenance;—tumid, and particularly tympanitic, abdomen;—obstruction of the bowels, or sour watery fætid or dark stools, resembling coffee grounds;—or vomitings of a similar dark fluid;—singultus;—suppression of urine;—hurried respiration;—delirium, and jactitation;—we may infer a fatal result.

In noticing the anatomical characters of this disease, I commence with those of the small intestines. The mucous coat is most prominently concerned. We find here, on its surface, more or less of tenacious mucus or serum, or sometimes extravasations of coagulable lymph, or of blood, pure or otherwise. These fluids being removed, the lesions commonly observable, are an injection of the vessels, exhibiting an arborescent appearance, or the more diffused florid blush of inflammation, which is comparatively seldom, or of a more or less slatish or brownish hue, or of patches or stellated specks only, of these several shades, or only ecchymosis. Gangrene, even in the worst cases, is not an ordinary occurrence in the small intestines. But softening of texture, which probably has been mistaken for it, often exists, and sometimes the reverse, greater consistency or density.

Besides these phenomena, appertaining to membranous inflammation, the follicular structure may be variously depraved. The isolated glands of Brunner, as well as the aggregations of the same cryptous formations of Peyer, are, especially in some instances, more or less developed or enlarged, sometimes becoming very conspicuous by their increased prominency, and are preternaturally red and gorged with blood. These are usually associated with inflammation of the tissues, though it has been asserted, that they may exist independently, and, in which event the affection is held to be peculiar, constituting the *dothinen-teritis*, a species of exantheme, as held by Bretonneau, Louis, &c. This lesion is most commonly to be met with in the lower portion of the ileum, about the ileo-cæcal valve, though no portion of the intestinal canal is exempt from it,—the glands of Brunner and Peyer being its principal seat. No doubt ulceration of the tissues, as well as of the follicles, do sometimes take place in acute enteritis, and, indeed, has been seen on numerous occasions by myself. But I reserve the description of it till I come to the chronic state of the disease, in which it oftener and more decidedly prevails.

Combined with many of the incidents enumerated, we occa-

sionally meet with in the large intestines, most frequently in the colon, gangrene, the part black, rotten, and singularly offensive. But there is another and very different condition which may be confounded with it. From extreme congestion of the vessels, it sometimes happens that a large portion of the intestines becomes perfectly black, without, however, any rottenness of texture or offensiveness of odour. The commencement of the colon is the principal seat of the phlogosis and its ravages, neither the sigmoid flexure nor other portions being so apt to suffer. Common to both sections of the intestinal tube are constrictions, and involutions,—and intromissions are frequent in the upper one. These are the productions of irritation of the muscular fibres, which are redder and more defined than natural, and such too is the aspect of the serous covering when implicated, with effusions of lymph in some instances on its surface. The inflammation sometimes extends further, embracing the *parietal* peritoneum, the mesentery and its glands, the omentum as well as the liver, and other organs, inducing diverse changes.

Closing the account of the lesions in this case, it may be proper to state, that as, in relation to the stomach, some of the appearances hitherto deemed criteria of phlogosis, such as vascular fulness or injection, or the complexion of the surface, whether florid or dark, or slaty, are not conclusive of this pathological condition, they occurring where it could not possibly have existed. Nor is the contrary less true, or that inflammation does occasionally happen in this structure, and of great intensity, without any evidence whatever, during life, of it having prevailed, it being revealed only by dissection.

No elucidation is required of this or other phenomena connected with the disease, after what was said under a former and similar head, and I shall, therefore, proceed to the treatment,—and which, as respects the upper portion of the intestinal tube, is also essentially the same as that of gastritis.

My remarks on the one as to the delicacy of the texture, the rapidity of the inflammatory process, and the urgency of the call for bold and decisive practice, are here equally applicable. The only difference of any moment in the two cases relates to the greater necessity in enteritis of opening the bowels. Though, from the irritation, there may be frequent mucous, watery, or bloody discharges, there is still, in many instances, a retention of

fæcal matter, or even unrelenting constipation. Before we meet this indication, especially in violent attacks, by the use of purges, the loss of blood becomes indispensable to reduce the phlogosis. Neglecting this measure, the former are either impotent or exasperate the condition. Constipation here is owing, for the most part, to a want of power in the bowels to propel their contents from the intensity of the irritation, and particularly of the muscular coat. This being subdued, the difficulty ceases. By far the most effectual means of doing it is venesection, when urged to an adequate extent. But the lancet being forbidden by prostration of strength or other causes, or the anticipated effect not following its use, leeches or cups may be very advantageously substituted. These should be applied to the back, with fomentations, and perhaps, by a blister to the abdomen. Thus prepared for their administration, purgatives are to be exhibited—the best of which is the blue pill, worked off by castor oil or Epsom salts.

Enemata are preferred by some of the recent writers, under the supposition that purgatives, by the harshness of their operation, might prove injurious. Not having seen it, however, in practice realized, I presume the apprehension to be groundless, and, hence, I act otherwise. Fæcal matter, or an accumulation of acrid colluvies being allowed to remain, must be aggravatory of irritation and phlogosis. Enemata are generally ineffectual to the removal of such collections, and utterly fail when the latter are lodged high up the bowels. Besides which, there are few persons, especially men, in this country, such is the invincible prejudice to it, who will consent to be *bored* in this way, not to advert to the unskilfulness of the nurses, from their want of experience, by which the object of the remedy is defeated. Many ludicrous blunders have come under my observation in the awkward attempts to administer enemata.

The depreciation of purgatives here, I suspect, has proceeded from the premature use of them, without the preliminary depletion I have enjoined, or the drasticity of the articles employed, or the too long continuance of the process, as well, perhaps, as the influence of some late theoretical views. Their inappropriateness to the early state of the disease has been shown, and it is quite certain, that they are mischievous when of an active character or unduly repeated: so cautious, indeed, am I on this point, that I rarely resort to them, after the first employment, contented

with keeping the bowels soluble by the mildest aperient medicines or injections, when the latter are permitted, and can be properly administered. Great reliance is placed by many practitioners on opiates in these cases, and by some they are appreciated even more highly than the loss of blood. But this is a monstrous absurdity, which should not be tolerated for a moment. The only indication they are calculated to fulfil in the beginning, is to allay painful and irregular movements of the bowels, and here, the Dover's powder is to be preferred, and subsequently, or after the activity of the phlogosis is reduced, a combination of them with the blue mass and ipecacuanha. For every other part of the treatment, in ordinary enteritis, I must refer to what was delivered in regard to gastritis.

Nevertheless, as mentioned, the lower section of the intestines may be differently affected, or instead of constipation, diarrhœa or dysentery exists in various gradations of force, with, however, such modifications in these affections, that they will hereafter claim a distinct notice. Enough is it for the present to state, that the leading object being, as in the phlogosis of the upper section of the tube, to subdue this condition, the same means are exacted, and on the attainment of which, then to evacuate the bowels in order to the removal of scybalæ, or offensive matter of any kind, with an occasional appeal to opiates and other lenitives of pain. As applicable to the disease, wherever seated, it is to be observed, that the patient should be confined to his bed, nothing exacerbating it more than locomotion, and that the diet and drinks ought to be of the blandest description, barley or rice water, or thin mucilage, or the farinaceous preparations, so as to create no irritation or to form any mass of fecal matter.

CHRONIC ENTERITIS.

From the close resemblance of acute and chronic inflammation of the bowels in reference to the whole intestinal tube, a very rare event in either case, I have little to add to what has been said of the symptoms of that general affection. It is only indeed, of late, that we have had any precise information of the chronic lesions of this structure, and previously lingering enteritis was contemplated merely as a protracted dysentery. No longer,

however, are we ignorant of its exhibiting all the forms of the acute attack, these modifications being determined by the same circumstances. Existing, as we are now to contemplate it, the affection runs a very indefinite course, gradually becoming more and more exasperated, as well in its original symptoms, as by the acquisition of new ones, properly appertaining to it, or arising from adventitious complications. Disorganizations ultimately take place, and then it assumes another character, as we have seen, in regard to the stomach in similar conditions.

It were unnecessary, after this general statement, to describe more minutely the symptoms of the various stages of this pathological condition, and especially as the deficiencies in this respect will be, in a great measure, supplied by the account I shall immediately give of the peculiarities it derives from its locations in the several portions of the bowels.

The chronic form of the disease is occasioned by a slower process of inflammation, of a primary nature, from similar causes, or follows, secondarily, an acute attack.

Let us now see its modifications from position. Except in a few particulars, they do not vary in the two states, and the inquiry will be rapidly dismissed. Being seated in the upper portion of the tube, with much of the physiognomy of protracted gastritis, it has still some peculiarities. Thus the uneasiness or pain from food is seldom felt for several hours, or till chyme has passed into the duodenum, when coming into contact with its sensible surface, sometimes vomitings with cramps ensue. Generally, also, the more inveterate attacks are marked by constipation or laxity alternately of the bowels—a saturnine complexion—still oftener by a dusky reddish or really jaundiced hue, with manifestations of hepatic derangement, to which may be added irregularities of the circulation, and above all, palpitations of the heart.

But other of the small intestines do not escape, and the ileum is most apt to suffer, presenting sometimes its own peculiar phenomena, though oftener a compound of the symptoms of duodenitis and of those of inflammation of the large bowels. Characterised as the latter is usually, by vitiated, alvine and urinary discharges, with more or less tormina and tenesmus, it sometimes, though rarely, exists independently of these affections, or they are so slight as not to attract attention.

It is, on the whole, very difficult, at all times, to distinguish similar states of the two great divisions of the tube, or even the lesions of the separate portions of each, so analogous are the individual symptoms, and so blended do they become very frequently in the chronic forms of the disease. The position and kind of pain or tenderness, the appearance of the stools, and the difference in colour and state of the skin are entitled perhaps to most confidence. What these are, when the superior part of the tube is concerned, has been told, and I will, for the present only mention, that, in the inferior portion, the suffering corresponds to the situation of the intestine,—that there is more or less diarrhœa, indicative of defective fœcation,—that the tegumentary tissue is singularly dry, rough, and furrowed, and of a dusky or clayey or pallid colour.

Considerable obscurity also may arise from the resemblance of the lesions of the neighbouring organs of the intestinal tube, the pancreas, the spleen, and especially the liver. As to the latter, however, we have to direct our decision, in addition to the position of the pain, to the peculiarity of the stools. What is the nature of these in the hepatic disorders, I need not say. That they vary from those in the purely intestinal disturbances is sufficiently known, though, perhaps, not the degree of difference when the colon especially is deeply affected. There is, under such circumstances, a total absence or great deficiency of real fœcal matter. To the colon belongs the faculty of fœcation. As soon as the caput mortuum of chyme escapes from the cæcum, it is naturally acted upon, and fæces are the product. But this power being lost, or materially impaired, then very different are the appearance and condition of the alvine discharges,—consisting ordinarily of offensive chymous or such like matters, with an occasional mixture of scybalæ, or small portions of less perfect fæces, elaborated in some healthy portion of the colon.

Enteralgia, however, which is incident to every portion of the intestines when fully developed, has so many of the features of chronic enteritis, that it is very apt to be mistaken for it. As a *neuralgia*, having hereafter more formally to dispose of it, I shall now only remark, that, in the outline, it is characterized very much as is gastralgia, and that as the latter is distinguished from inflammation of the stomach, so may the former be from that of the bowels.

Chronic enteritis is usually very hard of cure in an advanced stage. That of the duodenum is probably rendered so by the implication of the stomach or liver, and perhaps the pancreas, with which organs it is directly associated—and of the ileum, from the extraordinary proneness of that intestine to rapid and extensive ulceration. Nevertheless, in an attack, not so inveterate, whatever may be its location, we may hope to succeed in overcoming it, and occasionally in states of lengthened continuance. Even ulcers, when not large, are sometimes healed.

Less now need be said of the morbid anatomy of this affection, having presently, under other heads, to notice some of the most interesting parts of it. The phenomena, in its milder shapes, in the outline are very like those of the acute disease. Much the same changes does the duodenum undergo as the stomach under alike circumstances, such as increased vascularity and floridness, limited to points, or more diffused—or it may present all those shades of red, or slate, or brown, or livid hues formerly mentioned. Either softening or hardening, thickening or attenuation of texture occurs, with, however, seldom ulceration. But denudations of the mucous coat are not unfrequently detected, and also diverse lesions of the adjacent viscera, the pancreas, the liver, &c.

Little has been observed as to the jejunum. But nearly in every case of any severity and duration, with several of the appearances first noticed, the ileum is found replete with ulcers, sometimes very minute, and on other occasions of considerable extent, or at least some one or more of them. They are mostly follicular and of the aggregated glands.

To the whole of the small bowels is incident contraction of their calibre, in some cases amounting to an almost obliteration of it, especially about the ileo-cæcal valve, arising from thickening of the tissues. Three instances of it I have seen myself, one in consultation with Dr. Jackson, and several others are reported of the same kind.

The principal difference observable in the large intestines, is, perhaps, the greater tendency to destructive organic lesions. Though less liable to ulceration, when it does happen, it is more apt to spread from its membranous and not follicular nature. It is here, moreover, that we oftener detect inordinate thickening, and induration of tissue, or the reverse, ramollescence of it, scirrhosity and open cancer, luxurious vegetations, fungoid growths, strictures, hæmorrhoidal degenerations, &c.

It would occupy more space than I can well appropriate to the subject to describe these several lesions,—a part of them too has been erected into distinct diseases, claiming a separate consideration, and on some of them I have already commented. But so much interest is at present attached to ulceration of the bowels, that I cannot altogether pretermit it. This, it appears, may occur in the follicles, the isolated or aggregated, or in the tissues themselves, solitary or in immense numbers, even to the complete “riddling of the bowels.” Follicular ulceration commences with tumidity, and sanguineous engorgement of the gland—so that it becomes considerably enlarged and prominent, which state it gradually loses, and is indented, resembling the flattened pustule, or rather vesicle of small-pox. Now ulceration begins, by which the whole substance is progressively removed, and where adjacent glands are similarly affected and matured, a confluence takes place, and the lesion is greatly increased in some instances.

In different modes and degrees the surrounding tissues are here implicated. When those clusters of glands which have received the name of Peyer, are the seat of ulceration, it is ushered in very much as in the preceding case. There is the same swelling and prominency, only that this state presents large patches on whose surface slight ulcers may at first be perceived widely separated, which rapidly augment, run into each other, deepen, and prove very destructive.

Of membranous ulceration, the antecedent condition may be that of red spots, highly injected, or of more diffused redness and turgidity, or ramollescence. Its primary appearance is sometimes that of such extreme superficiality, as to seem to be mere exco-riations or erosions. This, however, oftener happens in acute attacks. Nearly always, we find in chronic cases, lesions of this kind bearing a similitude to the common ulcer of the stomach, formerly noticed. Like it, there is a perfect solution of continuity, the various coats of the bowels being successively destroyed—the excavation becoming deeper and deeper, till, in some instances, the whole are absorbed, and a perforation takes place. These ulcers are of diverse sizes, figures, and numbers. They are often not larger than the smallest venereal chancres, sometimes so small as to be even invisible to the naked eye, and I have seen them of the dimensions of several inches, of every shape, and may be solitary or actually innumerable. As they are large in

size, so do they usually less abound in numbers. More common to the colon, the cæcum is not exempt from them. I have seen two instances which were treated as abscesses of the right iliac fossa, where the pus evidently came from large ulcerous openings of the gut into that cavity—and a third in which the communication seemed to have been formed by an antecedent abscess externally to the cæcum. Many other examples of each kind are recorded. But were I to determine from my own experience, I should say, that the rectum is most exposed to this class of lesions.

The preceding ulcers of the several varieties have their origin in the mucous membrane. But on some occasions it is not so. The deposit of tuberculous matter in cases of phthisis, may be in the subcellular membrane, which, by irritating the mucous tissue, shall excite inflammation eventuating in ulceration. As to scirrhus and open cancer, I refer to the account previously given of these affections, when seated in the stomach.

Of its pathology, having nothing more to say, I shall proceed, with a single remark, to the treatment of the disease. It is very curious that though the mucous membrane of the alimentary canal, and that of the pulmonary organs are of essentially the same constitution, there is a most material difference in their liability to the ulcerative process—it occurring very often in the one, and very seldom in the other tissue. No satisfactory explanation of the fact, so far as I am aware, has hitherto been given, and I have only to offer, as a mere conjecture, that the difference is mainly owing to the greater annoyances and irritations to which the stomach and bowels are exposed from food, drink, and medicines. As to the management of these lesions, I have to speak only of such as belong to the upper portion of the bowels. Those of the rectum come within the province of surgery, to which they are resigned.

Discarding all stimulants and tonics, as in the early stage of the gastric lesions, we rely chiefly on general and topical bleeding, counter-irritation, with the use of laxatives or enemata, so far as to obviate constipation. Conquering the phlegmasia, then, to relieve irritation, and revive healthy secretion, a combination of the blue pill, opium or henbane and ipecacuanha, may be directed.

Lesions of ulceration, or indeed any other essential organic

change existing, little can be effected. Yet inasmuch as the first at least, when slight, have been known to heal spontaneously or otherwise, by the unerring test of cicatrices, some encouragement is afforded to endeavour a cure. From their supposed vulnerary properties, the balsams have been chiefly confided in, and lately the sulphate of copper, the nitrate of silver, the strychnine, and many other articles, which I believe to be useless.

It being impossible for the most part, to determine the precise nature and condition of these numerous lesions, I have deemed it best to manage them, without any very studious regard to special remedies, on general principles, taking care to regulate the regimen, so that it should not militate against the natural curative process, for the details of which plan I must refer to what was formerly delivered in relation to the affections of the stomach. Meaning hereafter to treat of the chronic intestinal fluxes, I shall postpone to that occasion the remarks which I should otherwise had to have made on these affections, when assuming such a character.

DUODENAL DYSPEPSIA.

Next, then, I am to advert to another chronic condition of the bowels, which may be properly viewed as an affection of that portion of the digestive operations performed in the intestinal tube.

Between gastric and intestinal dyspepsia, though a distinction was made by Hippocrates, the early Latin, and some of the modern authorities, as Hoffman, Pinel, and several others, it is said to have been first well described, as regards the duodenum especially, more recently by a writer of the name of Yeates, in an essay contained in the fourth volume of the Medical Transactions of London, which has never reached me, having only seen a very brief review of the paper in a foreign journal. Most therefore, of what I have to say on the subject, is the result of my own observations. Considering how much of digestion is carried on in the duodenum, by the pancreatic and hepatic fluids, and that the latter is intimately associated with the most important organs by the par vagum, and great sympathetic nerves, through the medium of the semilunar ganglia, we can scarcely hesitate to admit that its morbid states materially affect the assi-

milative processes, as well as that they must be productive of a variety of secondary disturbances. To this intestine very great importance was attached in former times, so much so, indeed, as to be called a *second stomach*, and I am much inclined to believe that it exercises scarcely less influence than that viscus over the economy.

In the case which I now am to sketch, that of duodenal indigestion, the appetite declines, or becomes capricious, though sometimes it is even voracious—the food oppresses, flatulence is very troublesome, much puffiness of the epigastrium exists, with occasional cramps, apparently of the duodenum. Fulness, distension, weight, or dull ache in the right hypochondrium, and across the loins, or between the shoulders, or down the arms, with numbness, or, as sometimes happens, along the lower extremities, prevails, with torpid bowels, light coloured stools, pellucid, or dark urine, and at other times depositing a pink, or lateritious, or white sediment, as thick as “gruel and water.”

The tongue is coated with yellowish or brownish fur towards the root and centre. There is occasional giddiness, violent headache, occipital, or in the crown of the head, and disorder of vision. Fever seldom is observed, though irregular chills may occur, with cold hands and feet. The pulse is usually a little accelerated, sometimes, however, preternaturally slow, hobbling, or intermitting, and palpitations of the heart, and diverse nervous affections are very common. Dyspnœa, with occasionally a harassing cough, increases the inquietude of the nights, and ultimately an icterose or leaden tinge of the skin takes place. Nor are these the only proofs of disordered health. Cutaneous eruptions on the face, of various species, are apt to occur, sometimes extremely hideous and enduring. In other instances hysteria, chorea, epilepsy, catalepsy, palsy, apoplexy or convulsions are induced. Children who are very liable to this form of indigestion, owing mainly to their ravenous appetite, and the improper indulgence of it, are most prone to some of these nervous affections. As regards convulsions, and chorea and epilepsy especially, I am entirely persuaded, that a large proportion of the cases in them are referable to it. The moral influence of this state is also very considerable as displayed at a more advanced age. Gloomy, querulous, and petulant from the beginning, the temper becomes still more so, in the progress of the case, and the intellectual facul-

ties dull, enervated, and incapable of steady exertion, I have seen finally so impaired by melancholy or hypochondriasm as to be rendered nearly useless.

The etiology of this disease is the same as that of gastric dyspepsia, with the exception that it is perhaps more directly occasioned by deficiency or vitiation of the biliary and pancreatic secretions, rendering them unfit to perform efficiently their offices. But it is also ascribable, in some instances, to the fault of the stomach, it permitting ingesta to pass into the duodenum, not adequately acted on, or wrought into chyme.

Of the cases with which it may be confounded, there are dyspepsia of the stomach, some of the lesions of the colon, and several of the hepatic derangements. Exceedingly difficult is it sometimes to distinguish it from the first of these, owing mainly to the two cases becoming in a great degree blended, especially in the advanced stages. Gastric disorder, however, of this kind, may generally be discriminated. The oppression from eating, which in it is almost immediate, is postponed for two or more hours in the duodenal attacks. There is in the former comparatively seldom any intumescence or puffiness of the epigastrium, which, when it does take place, is towards the left side, and is relieved by eructations of wind, or vomiting of some acrid fluid. The puffiness, on the contrary, is nearly constant in the latter, and more on the right side, and the gas having difficulty in escaping by regurgitation through the pyloric orifice, belchings, or sour eructations, hardly ever occur. Nor does vomiting, or even nausea. By some of the late writers, the further peculiarity has been noticed of the duodenal headache being nearly always attended by brilliant ocular spectra, which, however, I have never remarked. These symptoms may serve in part also to distinguish it from chronically inflamed, or a dyspeptic state of the colon. But the peculiarity of the stools in the latter are still more decisive.

In regard to the hepatic lesions it may be stated generally, that, with many other characteristic symptoms, where the duodenum is exclusively the seat of the disease, by pressure on the region of the liver, no uneasiness will be complained of: whereas, if it be made by the introduction of the fingers under the ribs, the palm of the hand, at the same time, resting flat on the abdomen, considerable pain is expressed. But what is still more significant,

"deep seated pain is pretty uniformly felt in the course of the duodenum, under the seventh or eight rib, stretching towards the right hypochondrium and to the kidney, and again appearing as if in the loins." It is remarked by Yeates, that so fixed is this pain, that a patient of intelligence will trace it with anatomical precision throughout its extent. Be this as it may, of which, however, I am distrustful, these cases prove for the most part exceedingly ambiguous, and we can only arrive at a satisfactory conclusion, by a faithful study and comparison of symptoms, with the consideration of every other circumstance, calculated to dispel the obscurity in which they are enveloped.

Duodenal dyspepsia, when recent, and in its milder shapes, is easily managed. But having become inveterate, it often assumes a different character, and proves very difficult, or even impossible of cure. Death sometimes, very suddenly ensues from it, more particularly in children, from convulsions, and in adults, or those further advanced in life, by apoplexy. There is indeed, great reason to suppose, that when such catastrophes take place, assignable to over eating, they are occasioned rather by lodgements of undigested food in the duodenum, than the stomach, as is more commonly believed. Certain it is, at least, that the fatal events, under these circumstances, more frequently occur some hours after, than speedily on the debauch, or about the time when it is presumable the irritating ingesta have entered the intestine. Generally, however, it is by a slower process that the disease terminates life, very much resembling what I have described as incident to confirmed gastric dyspepsia, by which health is gradually impaired, till the constitution becomes utterly ruined, attended by extreme suffering and distress of mind and body.

Of the post-mortem appearances I know nothing, never having seen a case opened, or met with any report on the subject, entitled to confidence. The phenomena hitherto noticed, consisting of diverse organic lesions, evidently the product of chronic inflammation, surely do not appertain to the genuine form of the affection. It is presumable, that they are the same as those in gastric dyspepsia, and that the pathology of the two affections is also essentially similar. The chief difference consists in this, that, though it does proceed as in the case of the stomach from deficient enervation, by which the contractility of the bowels is impaired, it is probably as frequently to be referred to some

aberration in the hepatic or pancreatic liquors, or to the transmission from the stomach of imperfect chyme. The mode in which the latter operates to such an effect is readily to be conceived. Habituated only to this bland pultaceous mass, whenever it is crude or not thoroughly concocted, it proves to the duodenum an extraneous irritant, which it has little power to dispose of, and suffers from it accordingly.

No inconsiderable portion of the management of gastric dyspepsia is as pertinent to this affection, and, indeed, in one form of the latter, where it proceeds from disorder of the stomach itself, permitting imperfectly digested matter to pass, it is precisely similar.

Not less here are local bleedings, counter stimulant applications, and finally tonics, in some circumstances, the most efficient means of cure. There is less similarity as to the pathological states peculiar to the duodenum. Thus, where the secretions into it are defective, the organs whence they are derived, must be rectified, and these are the occasions probably in which such decisive benefit occurs from the alterative mercurial practice. Large accumulations taking place in the intestine, from any cause, infinite relief is afforded, by moving away the oppressive load by purging. Certain articles are thought to be especially adapted to this purpose, among which are small doses of the sulphate of soda in a weak infusion of gentian or quassia, or the same bitters in senna tea, or a solution of the sulphate of potash in an infusion of quassia, or the vinous tincture of colchicum, where much duodenal irritation prevails. But the *dinner-pill* I have commonly found preferable to every thing else, and this, aided by a duly regulated diet of mild articles, in moderate portions, and of easy digestion, with exercise, will generally effect a cure.

An allusion has been made to a part of the digestive process performed in the *colon*. No doubt, if fæcation may be so deemed, that such is the fact. But the cæcum is also concerned in the operation, it being the receptacle into which the contents of the ileum are poured and detained, apparently to undergo certain changes, preparatory to the commencement of fæcation. Looking at the cæcum, we shall find much in its structure and economy to sustain this view. More than any other portion of the intestinal tube, does it resemble the stomach in figure and endowments, particularly that of the ruminating animals. It abounds

with glands, which secrete an acid, albuminous fluid, having very considerable solvent properties, and its contents being propelled in opposition to gravity, these, among other circumstances, seem very clearly to indicate a design for their further elaboration. The contents are usually a soft pultaceous mass, of a dark or yellowish hue, differing both from those of the ileum and colon, and hence it appears, that a material change is wrought in the cæcum on the alimentary mass it receives, fitting it to enter the subsequent bowel for a conversion into fæces. Granting this, however, it still remains to inquire, whether we can with certainty at all times discriminate the two affections, and, were it possible to do it, would the treatment be so influenced so as to demand a separate consideration. Doubting it, I shall unite the two lesions, as well in the history as management of them, occasionally, however, noticing some of their individualities.

Among the most conspicuous of the symptoms of this condition, is much distension and puffiness in the arch of the colon, sometimes, however, restricted to the right iliac region, and of a more round, protuberant, and immovable or incompressible character, the cæcum then being probably engaged. Constipation is common, with borborygmi of extraordinary loudness, often induced by motion, and nearly always by pressure. The stools when procured, vary however, sometimes, exhibiting a greasy aspect, and here again the cæcum may be suspected of being chiefly in fault, as it alone has those sebaceous follicles, by which such oily secretions are afforded. Decided fever, or even vascular irritation, is rarely to be remarked, though the tongue is heavily coated, the breath offensive, and anorexia, hebitude of mind, lowness of spirits, and an indescribable wretchedness of feeling, uniformly attend, with, sometimes, in the advanced stage, especially where the infarction of the bowel is considerable, pains in the back and loins, extending to the thigh, retraction of the testicle, strangury, hæmorrhoids, and œdema of the lower extremities, owing to pressure of the nerves and blood-vessels, in all which respects it is peculiar, or at least does not correspond to other lesions of the bowel.

The causes of this affection, so far as I have been able to determine, are essentially the same as disorder of the other parts of the digestive function. Every case of it which has come under my notice, except one, was in persons of impaired constitutions,

from excess in eating or drinking, or the inordinate use of tobacco or opium, or from extreme indolence, or an unhappy state of mind long continued.

We have seen how analogous it is in some of its features to chronic colitis. But it differs from it strikingly, by the absence of inflammatory signs, and in the prevalence of constipation, and not the opposite state of the bowels. Equally may it be distinguished from the dyspepsia of the stomach and duodenum. Not to repeat what has been so recently said of the prominent indications of this affection, I have only to observe, that with few of these, the uneasiness of the colon, after eating, seldom comes on, and perhaps never, unless the bowel be previously loaded, or any exasperation takes place, sooner than three or four hours—that pain is apt to be experienced when the bowels are opened, and that the stools, though betraying a defective fæcation, not often denote any want of bile.

Generally the disease is cured in the early stage, or at least I have never failed to do so, where I had an entire control of the management of it. But like all similar conditions, it usually proves obstinate and discouraging, and from the want of perseverance on the part of the patient, our efforts are frequently baffled or defeated.

Its anatomical characters are not determined. The recent attacks of it, perhaps, have no appreciable ones, and the more inveterate I suspect would betray in some instances, organic changes.

From its causes, its symptoms, and the mode of cure, I am inclined to believe, that in a very large proportion of cases the affection is merely a defect of innervation, creative of an enfeebled state of the peristaltic power, and that even the most chronic and intractable shapes of it, have had a similar origin, the injuries to structure which may exist, being secondary, and consequent.

The treatment of the disease is simple. Let the bowels be kept open by the occasional use of rhubarb chiefly,—apply frictions to the abdomen and spine twice a day,—wearing a Russian belt or flannel roller in the intervals around the trunk,—and strictly regulate the diet, the best articles of food being such as afford much nutriment in a small compass, so as to prevent the formation of any bulk of fæces,—enjoining also habitual exercise. But these means failing, it will be proper to resort to dry cupping, sina-

pisms, or blisters, or the whole successively, to the spine, or abdomen, or both, to a course of mercury, cautiously conducted, and finally to those mineral springs which I have recommended in gastric dyspepsia, they being not less serviceable in similar states of the bowels.

It were out of place here to speak of the management of the neuralgic lesions of the bowels to which I have referred, and I shall therefore decline touching the subject. My duty hereafter, will be to consider the preceding diseases *in extenso*, by which a fuller illustration will be given to some of the views contained in the general summary of them which is now completed.

CHRONIC FLUXES OF THE BOWELS.

Not a little diversified are the symptoms of this pathological condition,—though in nearly all instances, the bowels are very irritable, and consequently excited by the slightest causes. The stools may be small, and of mucus sometimes tinged with blood, or containing fragments of lymph, or are glairy or gleety—exceedingly copious, and of a light clay or ochre colour,—or dark and granulated, like coffee grounds,—or resembling greasy water, and of a cadaverous odour—or are seemingly of putrid chyme, or pulpy, mixed with ingesta, very frothy, and of divers hues, though usually of an ashy or slaty aspect, and are attended by more or less tormina and tenesmus or straining, or come away at once in a gush, or by a sudden ejection or squirting, without any uneasiness.

The mode of evacuation depends much on the character of the stools—slow and difficult, when they are small and tenacious, and the reverse, if large and watery. By the same circumstance is the number of these materially influenced, varying from a few to forty or fifty, in the twenty-four hours. Little appetite exists, or it is very capricious, being sometimes voracious—and the food taken is seldom thoroughly digested. The tongue is heavily furred in the centre and at the root, with florid tip and edges, or red and raw throughout as if scalded—or with scattered superficial ulcers on it, and the inside of the cheeks and lips, or down into the fauces—or it is pallid, attenuated, and flaccid. The skin is dry, furrowed, and of a dingy white or sallow, or leaden hue—

—the eyes sunken, with a shrivelled and meagre expression of countenance. Tenderness of the abdomen is felt on pressure, though not uniformly, and it is tumid or the contrary, lank, relaxed, or even collapsed. Borborigmi are very troublesome. The pulse is often contracted, hard and accelerated, with an irregular febrile movement, especially in the evening—or it may be natural or very diminutive and feeble, with low temperature of the surface, or while the extremities are cold, the belly is preternaturally hot. Emaciation advances rapidly, with corresponding debility, till finally, the individual sinks from absolute exhaustion,—death being preceded by œdema of the lower limbs, aphthæ of the throat and mouth, redness and ulceration around or within the verge of the anus, and the *Facies Hippocratica* strongly marked. The duration of attacks is very various, from a few weeks to months or years, subject, when long continued, to alternate remissions and exacerbations.

Of the disease as it usually presents itself, such is a brief description. But so much interest has of late been excited by a form of it, endemic to some parts of the United States, that it seems here to have a claim on me to some attention. Excepting in a single instance, never having seen it in the early stage, I am not able to describe it from any adequate knowledge of my own. It is represented to commence with the symptoms of dyspepsia, and which were strongly marked in the case I saw. Chiefly was it characterized in that instance, by a very irregular appetite, by a tongue foul and rough, difficulty of swallowing, slight inflammation of the fauces, and a few superficial ulcers, with a sensation of heat or scalding, extending down to the stomach—very often by epigastric oppression and nausea after eating, soon followed by one or more alvine discharges—by great intolerance of any other than the blandest food and drinks, and by a dry unspirable dingy skin.

As the disease has frequently come before me, it was far advanced, and only distinguishable from common diarrhœa by less emaciation, the flesh being rather flaccid and doughy than wasted, and by a peculiar sallowness of skin, more of the bright lemon, than the orange hue,—and by the number and copiousness of the discharges, which invariably resemble pale clay or fuller's earth dissolved in a quantity of water.

Chronic fluxes may be an original affection or the consequence

of an acute attack, protracted by neglect or ill management—and when of the former or primary nature, are assignable to many of the causes of the latter, operating less actively.

They are undoubtedly induced by malaria, whether the vitiation of the atmosphere be owing to the effluvia of vegetable or animal decomposition, or other offensive impregnations—scarcely less so by the excesses or variations of temperature, and particularly moist, austere weather,—or by the occupancy of cellars, and other damp, chilly, confined places.

As much, perhaps, may be ascribed to the direct irritation of the *primæ viæ* from aliments or drinks, such as tainted or tough indigestible meats, sour or mouldy bread, or crude or decayed vegetables or fruits, the intemperate use of ardent liquors or acescent wines, or bad water, putrid, or charged with adventitious matters.

They result, too, from long persistence in purging with drastic articles, as is practised by some for the removal of diseases, and above all dropsy of which I have seen repeated instances, and by whatever indeed is calculated thus to worry the bowels into a state of exasperation, or to destroy their tone, or otherwise throw them into derangement. It is in this way I have little doubt, that the horrible abuse of mercury throughout a considerable extent of our country concurs in the production of similar mischief. Nothing is more irritating to the alimentary tube, the liver, and to the whole of the abdominal viscera, than this very article, unless cautiously regulated—and when we advert to the indiscriminate and exorbitant employment of it by confessedly too many of the practitioners in the region to which I have alluded, the conjecture advanced seems scarcely to require any confirmation.

Constipation, moreover, sometimes induces it, and especially lodgements of hardened *fæcal* matter in the cells of the colon. By Fothergill, several cases of inveterate diarrhœa are reported, which having long resisted the usual mode of treatment, were finally cured by purging away a large collection of *scybalæ*, and such I have met with in my own practice. It is easy to conceive how this effect is produced.

Nor must the *exanthemata* be omitted in the enumeration of causes. These have their origin in the mucous membrane of the alimentary canal—and the translation to the skin not perfectly taking place, leaves behind an irritation productive of this

effect, as is strikingly exemplified in scarlatina, measles, &c. Chronic eruptions of different kinds receding from the cutaneous surface may operate also in the same mode, two instances of which I have seen.

The first was a case of acne in a young lady, whose face being very much disfigured by it, she finally drove it in by cosmetics, and for several months afterwards suffered severely from diarrhœa, —and the second occurred in an elderly gentleman, on the sudden disappearance of a large tetrous patch between the shoulders, —it proving even more obstinate and enduring. Both, however, were cured on the recurrence of the eruptions.

Nor is it less apt to follow the translation of some other diseases. Gout and rheumatism thus occasion it, and so does bronchorrhœa, in aged people especially. For several years, I have been pretty constantly in attendance on an old lady, for alternations of these affections, as soon as the one ceases the other beginning—these two portions of the mucous membrane, in this way keeping up a reciprocity of annoyance.

Certain sections of our country, I have said, are singularly liable to the disease, and it prevails to a great extent, especially at or near Richmond in Virginia—and New Orleans. Cases of it I have annually from each of these cities, and am assured that it is one of the most terrible of their maladies. No age, sex, or condition of life is entirely exempt from it, though it rarely occurs before puberty. What occasions it is not ascertained: nothing peculiar about Richmond exists to which its production can be referred, but at New Orleans the popular notion connects it with the use of the turbid waters of the Mississippi.

Diarrhœa of a somewhat different kind appears to be hardly less frequent among our Eastern population, especially that of Boston, the source of which is as little intelligible. But the individuals whom I have attended with it, in their passage through this city to the South, all concurred in stating that the attacks were ushered in as dyspepsia, followed after a long interval, by the bowel affection, then cough and other pectoral symptoms, marasmus, hectic fever, &c., imitative of phthisis pulmonalis.

Chronic fluxes, are moreover, of a secondary nature, from the extension of irritation to the bowels of other diseased organs, as the stomach, liver, spleen, pancreas, kidneys, uterus, the lungs,—

and I have seen them occasioned by hæmorrhoidal tumours, ulcerations and other lesions of the rectum.

No perplexity can prevail in the recognition of these fluxes, or in distinguishing them from all other diseases. It were highly important, however, in a therapeutic or practical view, could we discriminate the several states of the bowels on which the discharge depends. This I am apprehensive we cannot do with any uniformity or precision. Neither the symptoms, nor the appearance of the stools may be relied on, under all circumstances. Generally, inflammation is denoted by pain in the abdomen, hot skin, corded, frequent pulse, and by slimy membraniform, or bloody dejections. But, how often is their pain without phlogosis? And ulcerations, with other lesions are to be met with, where no expression had been given by this, or any more distinctive sign of their existence.

Mucous or serous discharges,—though ordinarily indicative of simple irritation or phlogosis, are occasionally found in every variety of case—and copious effusions of blood, the more common product of phlogosis, may be owing to merely a turgescence, or, perhaps, relaxation of vessels.

Gleety stools, usually denote a subdued state of previous inflammation—though not always, they sometimes proceeding from an ulcerative condition. Chymous like dejections are more uniformly significant of an imperfection in the digestive powers of the colon, or in other words, the process of fæcation, and the watery, with lumps of indurated fæces, attended by much abdominal weight and oppression, of constipation. Large and frequent eliminations of serum may be suspected to proceed from atony of the bowels, and particularly, where there is general debility, though in each instance, the exceptions are numerous.

Evacuations thin, greasy, and of a cadaverous odour, mixed with sanious, purulent, or fibrinous matter, are to be deemed, in my opinion, the least unerring criteria of organic mischief. But this test is also fallible, having seen extensive lesions of the same kind, with stools of earth-like solution, as I have just mentioned.

In a disease so various in its character, and occasioned by such diversity of causes, the grounds of prognostication must necessarily be vague and uncertain. Not much more can be determined, than that in proportion to the duration and severity of

the attack, the degree of constitutional disturbance, emaciation and debility is the prospect of a cure or otherwise. What is to be deduced from the aspect of the stools I have previously stated. Cases with mucous or gleety, or serous discharges, are usually the most curable, and those of cadaverous smell, the least so.

It may be further remarked, that in proportion to the extent of the aphthous ulceration of the mouth, is the diminution of the intestinal affection. It is indeed, by no means uncommon for the latter to be thus completely suspended, owing doubtless, to the metastasis of the irritation from the one to the other part of the mucous tissue. Cures, however, are seldom effected in this way, —the irritation sooner or later being replaced by a reversion of the original disease, and sometimes, in a more aggravated shape.

Evidence is afforded by autopsic inspections, of inflammation in its several gradations, in the mucous coat especially, confined to a part, or embracing a considerable extent. Commonly it is in streaks or stellated, or in patches. On other occasions, we meet with every variety of organic injury, from the simplest to an entire change of structure, among which, are thickening and induration of texture, or the reverse, attenuation or softening, and especially an œdematous condition, from effusion between the mucous and subcellular coats.

Not an unfrequent appearance is that of an enlargement, and inflammation of the cryptæ or follicles tending to suppuration, or ulceration, and in a more advanced stage, positive ulcers, which may be few, though oftener innumerable. Cases have repeatedly been examined by me, where it was as impossible to count them as the stars in the firmament. Large portions of the bowels are, indeed, sometimes found cellulated like a honeycomb. The ulcers are of various sizes, from that of the head of a pin to an inch or more, and when small, have a close similitude to the venereal chancre. Extensive ulceration existing, whether originating in the follicles or the membrane itself, which no doubt it does, it is by gradual spreading from a point, destroying progressively the contiguous textures. Connected with these, or independent of them, mere vegetations, or fungoid excrescences, are occasionally to be met with. I once opened a subject who died of the disease, where a fungoid growth in the colon was dis-

covered, nine inches in length, two in breadth, and half an inch in thickness.

It sometimes happens, that independently of the follicles, small pustules are observable, which breaking, leave behind a slight reddish ulceration, and in other instances, the mucous surface seems to be scalded as it were, here and there a vesicle or superficial sore, or more decidedly aphthous, in the whole, analogous to the state of the tongue, mouth, and fauces, which I have noticed. I shall say nothing here of the development of tubercles, which are very common in phthisis, since I have treated of that subject in another place.

An extreme attenuation of the intestinal parietes is a further occurrence. Bonnet tells us, that he has seen the bowels as thin as a cobweb, and in one instance, I found the ileum and part of the colon so wasted away, that with a delicate arachnoid peritoneal covering, a few fibres of the muscular tissue were only left, pallid and widely separated. This atrophy oftener happens than is suspected.

Moreover, though sometimes the mucous coat may appear sound, tubercles are concealed in the cellular texture under it, by which it is irritated to undue secretions, precisely as such extraneous bodies in the same tissue of the lungs provoke their mucous surface to inordinate discharges. But though some of these lesions are usually to be detected, it can scarcely be doubted, that the intestinal fluxes may prevail independently of them, or any others appreciable.

Confirmatory of this, it is reported by Andral, that he has frequently noticed the mucous membrane of the intestines, especially in children, perfectly white, with its natural thickness and consistence, both in acute and chronic diarrhœa. But it is highly probable, in some of the instances where the bowels have been represented as exempt from organic derangement, that the irritation productive of the discharge was sympathetic only—derived from contiguous or remoter parts, one or more of the abdominal viscera or the lungs, these organs, or some of them, being often found deeply affected.

Of the diarrhœa which I have represented as incident to sections of our southern country, the prominent appearances are, so far as I know, softenings of the mucous texture, an infinity of ulcers, and, perhaps, diminution in the size of the liver. Three

subjects only have I had opportunities of inspecting, and such were the lesions chiefly observable. The liver in two of them was exceedingly reduced, and of a dingy white—in another, the stomach exhibited a partial ramollescence, and, in the third, with extensive ulceration, principally of the ileum, the mesenteric glands were enlarged and indurated.

The pathology of the disease might, perhaps, be sufficiently collected from what has now been detailed, and my further reflections on it will therefore be very brief.

In all the profluvia, the discharge was once considered as constituting the disease itself, occasioned either by a depuration of certain peccant humours through the solids or a colliquation of the latter into a fluid. But such hypothetical crudities are no longer entertained, and to them has succeeded the doctrine, that the discharges are owing to a vitiation of the secretory process, immediately dependent on some change of condition in the organ, whence it proceeds, and which change may be functional or structural, and of divers gradations and kinds. Granting the general correctness of this doctrine, it still remains to inquire more precisely into the conditions affirmed.

That a vast increase of a discharge may take place from the mucous membrane, independently of any apparent lesion, is shown by the post-mortem evidence I have cited, and as certainly does it from the cutaneous, cellular and serous tissues. As the skin sweats, so may these eliminate their respective fluids in excess, productive of them. But, here, there is usually some excitement and turgescence of vessels. The discharge happening from metastasis, the same conditon probably exists. Thus, when the skin, under the influence of cold, ceases to perspire, and the bowels assume vicariously the office, there is in them an exaltation of action, corresponding to the loss sustained by the dermoid membrane. What the one loses, the other gains, to be added to its natural portion of excitement. This may be deemed congestive irritation only—and of the connection of these fluxes with phlogosis, and organic lesions, no one doubts.

Do they, however, occur in the absence of these several states? The theory of hæmorrhage and dropsy will equally embrace the present case. Like the sanguineous or serous discharges, the diarrhætic may be referred to either an active or passive state, and of the latter a very pertinent illustration is had in the analogy

of colliquative perspiration. As hæmorrhage or hydropic effusion, or such cutaneous transpiration, is met with in the lowest prostration of vital energy, so is diarrhœa, each caused by relaxation of the exhalents, and all requiring for their cure astringents, tonics or other means of invigoration.*

Establishing this distinction as a leading principle, its exceptions and limitations will hereafter appear in the treatment of the disease. But previously to entering on this I wish to remark as a conclusion from all I have said, that the discharge itself is merely an effect of an anormal condition of the bowels, the ascertainment and rectification of which constitute the real objects in the cure. To determine, however, the exact pathology of the case, we have seen is very difficult, and so long as it remains in such obscurity, the practice must be somewhat tentative and empirical. Nevertheless, in the want of more perfect information, we may be guided, in part, by the character of the stools and still more by the general state of the system.

The pulse being tense or corded, with pain and tenderness of the abdomen, aggravated by pressure, florid tongue, and not extreme weakness, we can scarcely err by a resort to venesection, the propriety of which, indeed, is attested by ample experience.

To Sydenham, in his account of the diarrhœa succeeding to measles, we are indebted for this great practical improvement, and which is not the least of his valuable contributions. Claimed recently as a discovery, it may have been overlooked or disregarded by others, though not by the practitioners of this city. From the time of my connection with the profession, such, at least has been the plan of treatment of every description of inflammatory bowel affection, acute or chronic. Nor will a single bleeding, however copious it may be, always or even generally suffice. Chronic inflammation, though not so immediately dangerous, has a much more stronger hold of a part than recent, and accordingly proves more difficult to dislodge or subdue. Not discouraged, then, if no very striking advantage accrues from the first bleeding in such cases, let it be repeated every two or three days, while the pulse and strength warrant the continuance, and we cannot fail ultimately to be well satisfied with the conse-

* The work of Andral on Pathological Anatomy, has a chapter on this subject abounding in facts and the most interesting views, which may be consulted with the greatest advantage.

quences. Certainly in some instances, I have bled from ten to fifteen times, taking away four, six, or eight ounces of blood in each operation, and found it essential to the cure. Topical bleeding is a very important auxiliary to venesection, sometimes superseding altogether the necessity of it, where the means of accomplishment, which is seldom the case in country practice, at least by leeches, can be conveniently obtained.

The inflammatory state having been overcome, gentle emetics occasionally, of ipecacunha, may be useful. They are not prescribed here as evacuates,—though not always without advantage in this respect, as to renovate, by instituting a series of new actions, the condition of the whole alimentary canal. Nor in their immediate operation, by inverting the peristaltic motion, are they without good effect,—and perhaps not less so, by inducing a determination to the dermoid surface.

In the management of this disease, it is of the last importance to restore to the skin its healthy functions, for till this is accomplished, no decided and permanent impression will be made. Great benefit accrues from the frequent use of the warm-bath with this view. To command, however, its full effect, where the skin is dry, and the capillary circulation torpid, some stimulating article should be added to the water, as salt,—and on the patient entering his bed, he is to be rubbed with a flesh-brush, or the hair glove, till a universal glow is diffused over his body.

The bath being not readily commanded, a stimulating pediluvium, or friction, with fine warm salt, may be employed as a succedaneum—and farther to promote the effect, a small dose of Dover's powder will prove serviceable.

During the day, a pill may be given every two or three hours, composed of a small portion of *torrefied* rhubarb, ipecacuanha, and opium. The ipecacuanha, on every account is singularly valuable in this disease, though there are some who prefer the antimonials, and especially the cerated glass of antimony, with opium,—a preference, I suspect, without any just foundation.

These medicines having been tried unavailingly, we may next resort to alum, which at one time was much prescribed in the form of whey. My mode of directing it, however, is in the dose of two, three, or four grains, to a quarter of a grain of opium, several times in the twenty-four hours, to which a small portion of ipecacuanha may be added if the skin continues dry, and the

patient be harassed by griping, or other uneasiness. By Mosely, a combination of alum, and white vitrol, called by him the *vitriolic solution*, has been greatly extolled. Of this I cannot say a great deal from my own experience, having been discouraged from any extensive use of it by its very disagreeable taste, and nauseating effects. Entitled to greater regard, is a union of alum and the sulphate of iron, in equal portions, say a grain or two of each, occasionally repeated, with or without opium, as the indication may be.

The acetate of lead, with opium and ipecacuanha, may have claims to attention, and the camphorated mixture, with nitrous acid and laudanum, is strongly commended.* In some instances, particularly where the liver is concerned, the nitro-muriatic acid internally or as a pediluvium, or by frictions, has certainly proved of service. It ought, however, to be cautiously used, and its effects carefully watched. Even when endermically applied, I have known it several times to bring on the most distressing dysenteric affections.

Contrary to common opinion, by which they are forbidden, I have seen the vegetable acids eminently beneficial. Diluted vinegar I allude to especially, though lemon juice sometimes also answers.

Most, on the whole, however, may be expected from the use of mercury. This is an indispensable remedy, when the case is associated with hepatic derangement, and even if such do not exist, it proves serviceable. Calomel or the blue-pill is given in minute doses with opium, and sometimes ipecacuanha, and prepared chalk, to attain the alterative, and not the salivant effect. The hydrargyrum cum creta, is, however, substituted on such occasions, in place of the preceding mercurial preparations, and, perhaps, advantageously.

By the unanimous voice of practitioners, blisters are declared to be of the greatest utility at this conjuncture, applied to the abdomen or the extremities, and may be alternately put on the ankles and wrists. The principle on which they act, in the latter instance, is that of revulsion.

Chronic fluxes with such discharges as to constitute merely a

* This is called Hope's mixture, from the author of it, and is prepared as follows:—the dose of which is a tablespoonful, several times a day. R. Mist. camph. ℥viij. Acid nitrous ℥j. Tinct. Theb. gtt. xl.

gleet of the bowels, are most successfully managed by the balsamic and terebinthinate preparations. Copaiva and tolu I have often used advantageously,—likewise the spirit of turpentine, and sometimes, even more so, common rosin, in the dose of four or five grains several times a day. The tar-pill, or tar-water, has similar properties, and I have reason to believe that creasote, as well as the pyroligneous acid, is worthy of attention. Belonging to this class of remedies are the *Hærlém-drops*, and *Turlington's Balsam*, nostrums which for a century or more, have maintained an extraordinary popularity, in the disorders of all the mucous surfaces, and certainly are here, not without value. Cubebs, I have known to be serviceable. *Nux vomica*, which had formerly some reputation under similar circumstances, is now superseded by strychnine, its active principle, as a neater and more efficient medicine. It has seemed to me chiefly adapted to allay intestinal irritability, and particularly when attended by spasmodic uneasiness, from the loss of tone.

The bowels being ulcerated, which I have said may be suspected from the appearance of the discharge, the balsams, terebinthines, together with the whole of the articles just mentioned, are thought peculiarly adapted. Not a little too, has been said of the nitrate of silver, as well as the sulphate of copper. But, whatever may be their utility, the principle on which they are applied, is surely erroneous. It having been found that ulcers of the external mucous surfaces when touched by either of these articles, are disposed to heal, it is presumed that given internally, they might have a similar effect, by coming in contact with the intestinal ulceration. This is sheer nonsense, and it is really inconceivable how the notion came to be entertained, that the fourth of a grain, which is the ordinary dose of these articles, covered up as they are in some other matter, in a pill, the only mode of exhibition, could thus operate, and especially on so wide spread a surface of ulceration as usually exists in the case.

Not much is to be expected from any treatment in this ulcerated state when of any extent. Except in two instances, never have I seen a cicatrix in the bowels, extensively as post-mortem examinations are conducted in this city. But facts of the kind are reported by Latham, of London, and among the French, by Petit, Billard, Andral, and Troillet, the latter of whom, has presented an example of ulceration, where there were marks of in-

cient, advanced, and complete cicatrization. That small and superficial ulcers more frequently heal, I have no doubt, and the reason why we do not detect the evidence of it is probably, that cicatrices are not formed under these circumstances. Exactly such are incident to the lips, mouth and throat, which are cured without leaving a vestige,—cicatrices only appearing where much substance has been lost.

Next I am to make a few remarks on that species, or variety of the disease supposed to depend on debility or relaxation of the intestinal exhalents. It may be the final stage of the inflammatory flux, already described, and it is to be met with, as a primary state of the bowels, among very emaciated and infirm people, either from age or other causes, or as symptomatic of consumption, &c. These cases, however, are exceedingly deceptive. General weakness may exist with a high degree of local phlogosis, or even ulceration. To determine this point, previously to entering on the treatment, is of great consequence. The previous history of the case should be carefully studied, as well as the existing symptoms, and it may be inferred with tolerable certainty, that ulcers or some other essential lesion exists, in the advanced stage of phthisis especially.

Being satisfied, however, of the absence of these adverse conditions, the indication becomes simple, pointing directly to the restoration of the tone of the *primæ viæ*,—and to this end, the whole catalogue of tonics and astringents is sometimes exhausted. Though for the most part inefficient, there is still undoubtedly a state of the bowels to be cured by this description of means. Experience teaches this, and we have the further evidence of their efficacy in similar atonic affections of the mucous surfaces of other parts, as of the urethra, vagina, and lungs, producing gleet, leucorrhœa, and some varieties of bronchitis.

Nevertheless, I repeat that the course must be experimental in a considerable degree. There is one source of illusion not to be overlooked. The evacuations may be suddenly checked, and relief presumed to be effected. The remedy here excites the muscular coat of the bowels into contractions, preventive for a time of the escape of the fluid, soon followed by tumidity of the abdomen, a distressing sense of distension, often colicky pains, and ultimately, the discharge bursts forth with increased violence. An occurrence of this sort, ought to be received as an admonition

of the impropriety of the practice, and of course to its discontinuance. But the effect being otherwise or really beneficial, then any, or the whole of the astringents previously mentioned may be recurred to, and these not succeeding, an appeal must be made to some of greater power.

An infusion of galls alone, or in various combinations, particularly with prepared chalk, and laudanum, is much prescribed in this atonic state of the bowels. The syrup of galls made in the following mode is occasionally directed: two drachms of the powder of galls, are to be infused in a gill of brandy sweetened, then set fire to the liquor and let it burn out, of which, a teaspoonful is the dose. Nearly of equal power is the kino. It is given in powder, or watery solution, or in tincture—though it is most efficient in tincture, with prepared chalk and laudanum. The dose is a tablespoonful occasionally. Of similar properties is the catechu, which may be exhibited in the same manner. Tannin, however, probably is still more active, and on account of the smallness of the dose, may be preferable in some cases, especially where the stomach is delicate.

As a mere astringent, much has been said of logwood, in decoction or infusion. The tincture of rhatany, however, has a still higher reputation. An infusion of the bark, or flowers of the pomegranate, is worthy of trial. Equally so is the cinnamon, and particularly the clove tea. I have also sometimes witnessed very good effects from the compound tincture of rhubarb, with laudanum, in small and repeated doses.

By our own country we are supplied with several active astringents. The only one, however, I have employed, and which I think is equal to any of its kindred articles, is the dewberry root, *Rubus trivialis*, in decoction. Combined with astringency, it has an aromatic flavour, which reconciles the stomach to it, and hence is rarely rejected. As a palliative, an opiate injection occasionally renewed, is here more effectual than any other remedy, and a blister over the abdomen, so long as merely to produce rubescence of the skin, will also, sometimes, mitigate the irritation, and temporarily suspend the discharge.

On the diarrhœa in those districts of the United States, formerly mentioned, I have to make only a single suggestion. The preceding remedies so far as I have remarked, are equally adapted to it, the one or the other to be selected according to the existing

condition. But since it seems to originate in local influences, the propriety of an immediate removal beyond their noxious sphere, is obvious.

This is the medical management of primary fluxes, having hitherto only referred incidentally to the secondary form of the affection. But there is no difference so far as concerns the bowels, the main object being to detect and remove the parent disease, whence is derived the intestinal irritation, of which the discharges are the consequence. The treatment, however, of the lesions of the organs to which I allude, being foreign to the present occasion, I shall not, at present, expatiate on the subject. It must suffice to mention, which I am induced to do, as perhaps, less apt to attract attention, that these fluxes are far more frequent than suspected, to be found in connection with some irritation at the extremity of the rectum, operating either as the original or aggravating cause—and that whatever may be its nature, it is very important to get rid of it without delay. Nor must I forbear to observe, as an exception to the general treatment of diarrhœa, that the cure of the case from constipation depends on the removal of that state, by purging, and subsequently by the means calculated to prevent its return.

We come now to the consideration of regimen, on the due regulation of which, every thing depends.

It is usual to select for food those articles supposed from their astringency to bind the bowels, which I think is a mistake, derived from the false notion, that the discharge constituting the disease,—the great purpose in the cure is to restrain it. The indication, on the contrary, is to soothe irritation by the blandest nutriment, thus making it harmonize with the other parts of the treatment. Having this property, and by which they are so well adapted, we commence ordinarily, with the mucilaginous or farinaceous matters,—gum arabic, the slippery elm or the benne, and tapioca, sago, sallop, arrow root, rice flour, &c. Gruel and thin broths, though usually proscribed, from an apprehension of their running through the bowels, I have found, on the same principle of allaying irritation, sometimes well adapted. We direct them in cholera morbus, and why not in the present case? Milk, on some occasions, answers very well—and, perhaps, no article more uniformly agrees with the patient than buttermilk.*

* Milk may be given alone, or thickened with some of the farinaceous matters

Digestible solids, as mutton, or fowl, or game, or oysters, raw or slightly roasted, may subsequently, on the abatement of irritation, be allowed—and I have seen benefit from an occasional indulgence in a small portion of ham, or salt fish, under similar circumstances.

Crackers or stale leaven bread are only proper. Fruit I have sometimes known to be appropriate, particularly peaches. The dew or blackberry has a large share of popular confidence in this respect, to which it is not more entitled than strawberries. These, and I may add oranges, habitually and almost exclusively used, have cured the disease. Mentioning on a former occasion some cases to this purport as regards the latter, the physician-general of the British forces in Canada, who happened to be present, informed me that his wife having suffered from diarrhœa for a long period, during which she had visited Europe, and received there the best medical advice without avail, was finally cured by living entirely on oranges, to which she was prompted by an urgent desire. Yet generally fruits disagree, or prove as injurious as the common vegetables.

The best drink, at first, is rice or barley-water, or some similar article, and brandy and water, or port wine, in the advanced atonic stages. Neither much food nor drink should be permitted at a time, it being very apt at once to pass through the bowels, nor the latter be very cold for the same reason.

Many of the cases of aggravated diarrhœa, may be considered as materially dependent on dyspepsia, and hence all the dietetic rules in relation to that affection are to be observed, together with a recurrence to the ordinary remedies for its removal.

No one questions the necessity of preserving an equable temperature on the surface in the intestinal affections, and among the best means of securing it is a flannel roller, while at the same time, by its compression, further and more decided effects are attained. Equally important is it carefully to protect the feet—these, when cold hardly ever failing to revive or exasperate the affection.

Exercise has been greatly insisted on as a curative measure,

mentioned above, the best of which, is wheat flour, thus prepared.—Enclose in several folds of linen, half a pound or more of it, drawn tight into a ball, and then boil it for several hours in a pot of water. On cooling it becomes hard, and must be grated into a powder.

but whether it operates for good or evil, will depend on its being properly timed. During the continuance of any activity of phlogosis, it must be avoided—absolute rest even in the recumbent posture, having the most salutary influence under such circumstances. It is, indeed, in many instances the *sine qua non*, or without which every thing else will prove nugatory—while in an opposite or atonic condition, taken in any mode it is eminently serviceable, though more so on horseback, and particularly if it be extended to a long journey. More than one of our watering places, the White Sulphur Springs and the Thermal Baths of Virginia especially are deemed very efficacious.

Few diseases are more affected by certain states of mind or temper than these fluxes. I have seen the bowels at once give way, and flow most copiously, under a paroxysm of anger or fretfulness, or any other moral perturbation, exactly as the urinary bladder does, permitting its contents to escape from the influence of fear, and some similar emotions. Disturbances of the kind, are hence to be avoided by the imposition of proper restraints on those who are so unhappily constituted as to require such regulations.

Even, however, if all these expedients fail, the patient is not to be abandoned. As a last resort, a sea voyage to some temperate climate should be recommended, which will sometimes succeed, when all other measures have proved nugatory.

It is matter of great moment to remove these fluxes. Exhausting as they may be in their immediate effects, they are connected with pathological conditions, which become aggravated by delay, leading too often to the saddest catastrophe. Looking at some of the results only, "the bowels" says a late writer rather quaintly, "being unfaithful to the stomach, and instead of playing fair, let go their hold of the pabulum vitæ before the lacteals have properly performed the process which that grand organ has prepared for them, nutrition must be deficient, and the consequences of inanition ultimately take place. Nor," continues he, "does the mischief stop here." Locke tells us that people with relaxed bowels have seldom strong thoughts or strong bodies. To a certain extent this may be true, and it is one of the numerous instances illustrative of the intimate dependence of our moral on our physical condition.

CONSTIPATIO, OR CONSTIPATION.

The application of these terms, constipatio, or constipation, to the condition I am to describe, is comparatively of recent date. *Constipatio*, according to its derivation, *con* and *stipo*, means to fill up compactly. By the Latin writers of antiquity, *obstipatio*, which comes from *ob* and *stipo*, to stop or close up, was used to express this affection of the bowels. But since they are equally significant, and the first is sanctioned by modern usage, I shall adhere to it.

Good has made *coprostasis* a genus, and divided it into *constipata*, or costiveness, and *obstipata*, or obstipation. The chief difference between them, according to him, consists in the evacuation, in the one being large, and in the other the reverse, small and lumpy. Each, however, depending on the same pathological state, I can discern no just reason for such a distinction. Nevertheless, the affection varies so essentially in some other respects, that to attain perspicuity, I shall have to dispose of it under several separate heads, as will appear in the progress of the inquiry into the subject.

Constipation may be acute or chronic—either a recent occurrence, or a more permanent or habitual state of the intestinal canal. It is the second form only that I shall consider in the present article. This is purely functional, or proceeding, at least, from scarcely appreciable organic lesions—or is owing to structural derangements of the intestinal tube itself, or of other parts intercepting or otherways affecting the alvine discharge. Considered in the former view, which primarily claims attention, I mean by constipation, a preternatural retention of the excrement, which becomes hard and dry, so as to render the evacuation of it slower, and more or less difficult and painful.

Constipation, however, is a relative condition. Cullen deems every deviation from a diurnal opening to be unnatural. But to such a rule, true in the main, there are many exceptions, referable to original or some acquired peculiarities. It is, indeed, very common to meet with persons who eat very little, and that of articles affording no bulk of residuary matter, to pass a week or more without an evacuation, and to experience from the interruption of the function very slight inconvenience. Nor are we

wanting in proof of the same immunity from suffering, where the diet was unlimited, and the period infinitely more lengthened—some of which instances are reported to have extended to ten, twenty, and thirty years. But though the more extraordinary of these may be exaggerations of fact, no doubt constipation has endured for a very considerable time, with much less detriment to health than could possibly have been imagined;—in evidence of which, Heberden informs us, that he knew a person, who, all his life, had a single motion only a month—and Thomasini states, that he met with another in whom costiveness, which was congenital, gradually increased from an opening every eight or ten days, to twelve,—and then, in his thirtieth year, to twenty-two days, thus observing the law of periodicity. The man was an enormous eater, consuming double the usual quantity of food. We are further told by the late Professor Rush, of a captain of a packet ship between this port and London, who never had an opening in crossing the Atlantic, and scarcely suffered from the want of it.

Cases of much longer retention, though not with the same impunity, are no less abundantly distributed through our records. Thus by Rhodius, one is related of two months' continuance—by Panarolus, a second, of three months—by Baillie, a third, of fifteen weeks—by Chaptal, a fourth, of four months;—and, what is very remarkable, in the last, with very scanty discharges from the kidneys and skin.

Crampton, of Dublin, has published three cases, in one of which there was no alvine passage for eight months, and during the preceding year, only two or three partial ones;—in which condition, the woman had lived for seven years. In the second case, which had been protracted for several years, "it was considered quite an extraordinary occurrence to have a stool;"—and, in the third, he states, there were rarely any discharges.* By O'Beirne, a case somewhat similar has very recently been given, where no *fæces* were voided for half a year.† Not the least remarkable instance is recorded by Dr. Bache, of this city, in which, for nearly ten months, the bowels were opened only three or four times, and finally recovery ensued. Much such a case has since been reported by Mr. Dickson, a surgeon of London, of eighteen

* Dublin Hospital Reports, Vol. IV.

† N. Amer. Med. and Surg. Jour. No. XII.

months continuance, and another by Montesento, an Italian physician, where the period was protracted for seventeen years of a suppression of both the alvine and urinary discharges.* In all these latter cases, vomitings of fæcal matter frequently took place, with great distress in other respects.

Nevertheless, this condition, even when there is no very acute or urgent suffering, is generally found to be incompatible with a comfortable existence, and is characterized by a thickly coated tongue, anorexia, nausea, sensations of load and distension of the abdomen, borborigmi, heaviness, vertigo, frontal or occipital headache, cutaneous eruptions, foul breath, and very offensive excretions, with a variety of other results of a highly unpleasant or disgusting nature.

Confirmed into a habit, the foundation is laid of many and more formidable affections;—among which are febrile irritations, irregular circulation, and consequent hæmorrhage, varicose veins, hæmorrhoidal tumours, enteritis, colic, even the iliac passion, inveterate dyspepsia, apoplexy, hydrocephalus, palsy, hysteria, epilepsy, chorea, tetanus, &c. The worst case of tetanoid convulsions which I have ever seen was induced by a collection of cherry stones in the rectum.

The mind shares in this physical disorder, and sometimes to a great extent. Even mania itself has been occasioned by constipation;—and melancholy and hypochondriacism are still more frequent events. Commonly, however, it becomes listless and inefficient as regards all active exertion, with more or less hebetude, and confusion of the senses. The temper, too, is morose, petulant, and querulous.

That the character and disposition may be materially influenced by such a state of the bowels, is well established. The celebrated Voltaire, acting on this well known fact, has, in one of the articles of his Philosophical Dictionary, very humorously ascribed half the evils of Europe to the intestinal irritations from this source of the public men of the age. "Let the person," he adds, "who may wish to ask a favour of a minister, or a minister's secretary, or kept mistress, endeavour previously, by all means, to ascertain whether they go to stool regularly;—and if possible, to approach them after a comfortable evacuation, that

* Johnson's Med. and Chirurg. Journal, for 1839, April No.

being a most propitious moment, one of the *mollia tempora fandi*, when the individual is good-humoured and pleased with all around him."

This affection seems sometimes to be constitutional, and especially in cold, phlegmatic or nervous temperaments. Those, too, are very liable to it who are distinguished by the copiousness of other discharges, it being a law of the animal economy, that the augmentation of the one shall be at the expense of the other function;—and, therefore, most apt to occur in hot or cold weather, from the preponderance of the perspiratory or urinary processes.

The habit of study, or occupations of any kind within doors, provided they be sedentary, have a similar tendency;—on which account, probably, the female is predisposed to it more than the male sex. Nearly, however, it is as incident to tailors, cordwainers, weavers, and other like mechanics or artisans, who work permanently sitting. The reverse, or active or steady exercise on horseback, constipates the bowels, or the continued motion of a vessel;—and hence the general complaint to this effect among post-riders and mariners, &c.

Certain ingesta conduce to its production, as the too exclusive consumption of animal food, particularly salted or smoked, or of ardent spirits, or port wine. Tobacco is, perhaps, more pernicious in this respect. Numerous are the instances of constipation which I have met with from this article. The primary effect of it, in whatever mode consumed, is rather aperient, and the persistent or inordinate use, directly the contrary.

Equally so is the silly practice indulged by some real or imaginary valetudinarians, of constantly taking medicines, either of a narcotic or purgative character;—and, above all, calomel, to the extent in which it is employed in some sections of our country. No article is so stimulating to the liver;—and the excitement it creates is ultimately followed by torpor and depravation of its secretion, a healthy state of which is indispensable to the peristaltic movements.

The causes, however, of constipation may be seated in other parts, the bowels being affected secondarily by a derivative influence from remote or disconnected sources. Derangements of the liver, as mentioned, by which the secretion of bile is diminished or vitiated, are well known to induce it;—and not less cer-

tainly does it proceed from lesions so trivial as not always to be appreciated, of every portion of the nervous system, the brain, spinal marrow, and ganglia, as well as of the nerves themselves—the impression being reflected back on their centres, occasioning a slight degree of the paralytic condition.

As probably acting somewhat in the same way, may here be mentioned, pregnancy, the gravid uterus pressing on the nerves, and also enlargement of other viscera, or the presence of adventitious tumours in the abdominal cavity. These, it is true, do sometimes operate differently, or by overlaying, as it were, a portion of the bowels, pressing together its sides, thereby obliterating or reducing its calibre, to the interception or total prevention of the passage of the stools. Examples of such have been reported by several of the cultivators of morbid anatomy.

Constipation is so distinctly marked, that it can scarcely be mistaken, and hence it were useless to indicate its characteristic signs. But in a practical view, it is very material to discriminate its several varieties;—whether the cause be a primary or secondary affection—its causes—the length of its duration—the precise pathological condition at the time—and the aids to such a determination, will hereafter be noticed in their proper places.

We shall presently see on what grounds our hopes, or otherwise, of a cure should rest. It may now suffice merely to state, that functional constipation, though frequently tedious in the management, is under our control. But, arising from any essential structural alteration, less is to be promised, and, when under these circumstances, often proves irremediable.

Of the *post-mortem* appearances, in what may be deemed the functional form of the affection, we have no accurate information, owing to the few opportunities of inspection from the rarity of death. But we have learnt that chronic congestion and inflammation of the bowels, particularly of the muscular and peritoneal coats, have been detected;—and, also, that the mucous surface is unusually dry, being alike deficient in the product of the exhalents and follicles. Contractions of the small bowels, seemingly from spasm, and irregular dilatations of the large, independently of any accumulations in these portions, except flatus, have been remarked as common—while some one section of the tube, and mostly of the cæcum or colon, is nearly always heavily loaded with faecal lodgments.

Next to the bowels, the liver seems most generally disordered, sometimes by slight inflammation, though more generally by turgescency or engorgement. Nothing have I ascertained with regard to the brain, spinal marrow, or nerves, which undoubtedly are implicated in many instances of the affection. The tumours and other morbid growths within the abdomen, which have been found in connection with some of these cases, were exceedingly diversified, and need not be described.

Touching the pathology of costiveness, I have in the first place, to repeat a remark formerly made, that is insisted by some, that the affection is confined to the small intestines, in which opinion I cannot coincide. That from atony of this portion of the tube, the alimentary substances may be retarded in their progress downwards, is readily to be conceived, and, indeed, was shown to happen, on a preceding occasion, when engaged in the discussion of duodenal indigestion. But this is not constipation in the usual meaning of the term. It is in the colon principally, and perhaps exclusively, that the process of *fæcation* goes on:—the accumulation of the product of which, from a tardy movement, constitutes chiefly the affection. Taken in the other sense, constipation may undoubtedly be incident to the upper intestines, though it were better to say obstruction, as more accurately designating the condition.

Every case of *functional constipation*, of a genuine nature, may be referred to one of two states, a diminution of the excitability of the intestinal canal, in part or the whole, or deficiency of bile or vitiation of its properties. To enable the intestines to perform the office of propelling their contents, the circumstances required are, susceptibility to action, and a stimulus to excite it, which is mainly the bile;—the want of either, of course impairing the function. That a third cause, I am aware, has been assigned in the rapid absorption of the thinner portion of the *fæces*, by which the residue becomes firm, and is detained. But it is to the torpor of the intestines, of which I have spoken, allowing their contents to be so long retarded in their passages, that such an effect should be referred. This torpor of the bowels is ascribable to an interruption in the supply of that nervous influence by which susceptibility is conferred. It is not unlikely, that each set of nerves, those of sensation as well as the motory, are affected, having seen cases of constipation in which this general

loss of nervous power was very unequivocally manifested. Granting the co-operative concern, which has been contended for by some, and I am not disposed to question it, of the intestinal secretions in the promotion of this office, their suppression or depravation must still be considered merely as a subordinate part of the same effect just mentioned, from the irregular distribution of the nervous energy.

In the cure of constipation from disordered function, the leading indication is to endeavour to ascertain the immediate origin of the affection, whether it proceeds from the one or the other of the two conditions by which it is alleged to be produced. Much is to be expected, when susceptibility is deficient, from electricity or galvanism, if the report of their efficacy can be credited, on some of the best authorities of Europe and this city. Taking these agencies to be identical with nervous energy, or excitants of it, which latter especially has been assumed as a fact, the induction is held to be legitimate, that they should succeed in disease caused, or kept up, by a diminution of this influence. But plausible as they may seem, I confess that I have witnessed, on trial, no extensive verification of these fair promises. Even admitting the principle maintained, it so happens that many of these cases, though not ostensible, proceed from lesions of the nervous centres of a nature not to be removed by such agency.

Greater advantage have I derived in very obstinate attacks, from cups or leeches and counter-irritants to the spine, placed as the upper, lower, or intermediate parts may appear to be affected, with the concurrence of the daily use of the warm bath, and frictions over the back and abdomen.

But from ten drops of the radical tincture of colchicum, repeated several times in the twenty-four hours, and persisted in for some time, as much may be anticipated with a view merely to the restoration of the lost susceptibility of the bowels, as from any thing else within my experience, rarely, indeed, having seen it to fail. It is essential, however, to its success, that the dose be small, and this is a precept to be observed in relation to all medicines in this form of constipation, the object being attained rather by gradual insinuation, than a forcible impression.

Most important is it, especially in resorting to purgatives, that the drastics be avoided as calculated further, by stimulation, to expend susceptibility. Every one is familiar with the fact, that

the tendency of such articles is to costiveness, and by repetition of them, the habit becomes established. Castor oil or the neutral salts, or some one of the mildest aperients, are to be selected. Employing any of the salts, it should be in free dilution. Dissolved in half a pint of water, a drachm of them is as effectual, as three times the quantity differently prepared. Their potency is also increased by uniting several of them together, the sulphates of soda and magnesia, the muriate of soda, &c., as well as that, the operation is rendered milder or less irritating. It is owing to this combination of several salts, in free dilution, that the waters of our purgative mineral springs, are so much more active than might be presumed from the small amount of ingredients of this description, they are shown to contain on analysis.

Great advantage have I known to result from eating daily a few prunes prepared in the mode I am now to direct. To a pint of an infusion of senna, add half a pound of fresh prunes, and three ounces of sugar, and these simmer slowly till they are thoroughly softened. The impregnation of the senna, gives considerable efficiency to the prunes, without any of its disagreeable taste or griping quality.

To some of these cases, rhubarb is exceeding well adapted. Even by chewing occasionally a small chip of the root, and swallowing the saliva, the bowels are preserved soluble. But when more activity is demanded, two or three of those pills partly composed of rhubarb, may be taken every night, which from the gentleness of their operation, have acquired the quaint title of *peristaltic persuaders*.*

Concerning the second form of constipation, dependent on disorder of biliary secretion, chiefly distinguishable from the preceding, by the peculiarity of the character and aspect of the stools, it is desirable, previously to entering on the treatment, to determine the exact nature of the hepatic derangement, since, to the rectification of this, our attention is primarily to be called. Commonly, however, in recent cases, there is simply congestion of the portal circulation, to be removed by general or local blood-letting, with perhaps some counter-irritation and mercurial purging. This engorgement having been overcome, without adequate relief, a

The following is the prescription of the "Peristaltic Persuaders:" R.—Pulv. rhei ʒi.; Pulv. ipecac. gr. x.; Oleum carui. gr. x.; Gum arabic, q. s. Ft. mass. et div. in pill. xx. Two or three of these are to be taken every night at bed-time.

resort may be had to the laxatives I shall now enumerate. They are a mixture of sulphur and magnesia, of which a couple of tea-spoonsful may be taken on going to bed, or a wine-glassful of a solution of coarsely powdered brimstone, with half an ounce each, of the sulphates of soda and magnesia, and the muriate of soda, in a quart of water. Exceedingly efficacious are these preparations, though objectionable to many, from their nauseousness. In this event we cannot probably do better than recur to some of the combinations of rhubarb, and above all to the *peristaltic persuaders*. Yet I have seen the extract of the butternut, (*Juglans Cinerea vel Juglans Cathartica*,) four or five grains at a dose, answer very well, and the same amount of the alkaline extract of jalap has lately received very strong commendation, which, from my own trials of it, I do not think it deserves.

By the older practitioners, the aloetic preparations were employed under the supposition that, from the intense bitterness of the medicine, and some other properties, it might be substituted for the bile. This is not true;—and besides which, the habitual use of aloes is supposed to produce, or aggravate the hæmorrhoidal affections. Now and then, however, we add aloes to rhubarb and other articles.

With the same view, the bile of the ox has been prescribed, and is strenuously commended by Richter, and several other writers. That it is sometimes beneficial, at least as a laxative, my own observations have satisfied me. The bile is to be inspissated over a sand bath, and then made into pills.

Charcoal has acquired some repute in constipation, without, however, any discrimination in the application of it. Taken largely, it will purge with some activity. Of this fact I was aware, before I had read any thing on the subject, having several times prescribed it for the purpose. The case to which it is best suited, is where the tongue is thickly coated, the mouth clammy and out of taste, and the breath heavy and offensive, which it corrects. The power of charcoal in destroying the odour of substances is very extraordinary. Completely does it divest the fæces of their bad smell;—and long has it been known to have the same effect on offensive ulcers, and indeed on any odorous article, as musk, assafœtida, &c.

Constipation, not yielding to the foregoing measures, it may be concluded that the habit is strongly confirmed, and we must

appeal for its subversion to the revolutionary power of mercury. This is serviceable in either state, whether proceeding from a loss of sensibility in the bowels themselves, or caused by hepatic disorder, though it is more particularly so in the latter case. Experience has taught me that the practice most successful under such circumstances, is to give the blue pill every other night and work it off the next morning with a mild laxative.* Mercury need not be urged to the point of salivation—though properly moderated, it is not prejudicial. Nearly in the same way does the nitro-muriatic acid operate, by the promotion of biliary and intestinal secretions, exhibited internally and applied as a pediluvium, or as a lotion—the latter modes being preferable.

We pass to the consideration of some other states of this affection, differing very widely in their causes, nature, and general features. Not the least interesting of these, is the one proceeding from structural lesions of the nervous system. Constipation of this sort is mostly indicated by pain or uneasiness of the head, or about the loins, and around the abdomen—by strangury or an entire suppression of urine, and by diminished power in the inferior extremities, or at least by numbness and reduced sensibility. Not often is there any intensity of pain in the bowels themselves, however loaded they may be, though when thus oppressed by fecal collections, the most distressing retchings or vomitings sometimes take place. Examples, however, I have witnessed, without these, or, indeed, any strong or unequivocal expression of suffering whatever.

To blows, falls, and other acts of violence received by the head, or vertebral column it may often be traced;—and scarcely less so to lesions of the spinal marrow, attended by obvious manifestations, or otherwise, the mode of origin of which may not be always ascertainable. Consequent on saturnine cholic, occurrences of it are familiar, and I have seen it in three instances to follow ordinary flatulent, and still more frequently, bilious colic.

Embarrassment will be encountered on some occasions, where the lesion is not prominent or obvious, in determining its origin, whether in the brain, spinal marrow, or the ganglionic nerves,

* The following is a very appropriate mixture: Infus. Tarax. ℥iv; Extr. tarax. ℥ij; Carb. sodæ ℥ss.; Tart. potass. ℥ij; Tinct. rhei ℥ij. M. The dose is a wine-glassful.

owing to the commonalty, or at least a closeness of resemblance of symptoms in these affections. Chief reliance must be placed on a careful investigation of the history of the case, and a comparison of its phenomena with those of the affections having the nearest affinities. For the most part, however, it is primarily seated, or becomes very conspicuously developed in the spine, and then is clearly denoted by a protuberance of one or more of the vertebræ, or in the absence of such, by tenderness on pressure, or by percussion.

It is only in the more moderate of these cases, or where no great injury has been done, that we can hope to be of much service. The condition is that of paralysis of the lower bowels, of various gradations, some of which admit of little else than mere palliation. In those, however, which hold out any reasonable encouragement, the remedies ought to be directed mainly to the point that appears most deeply concerned in maintaining the disease, consisting of local depletion and counter-irritation. Contrary to what was proposed in the functional state of the affection, it is here that I have derived advantage from purging with the energetic articles, the best of which are castor oil, with the addition of the spirit of turpentine,—the croton oil, or the elatin;—and after such a course, from the white mustard seed, so given as to keep the bowels open. Enemata of some stimulating ingredients may be useful, though alone not often effectual.

Of constipation unequivocally dependent on positive disorganizations of the liver, I have very little to say. The leading symptoms are those of hepatic disorder;—and such as specially appertain to the intestines are no exceptions. An absence of bile is uniformly betrayed by light clay or slate-colour stools, consistent, or even solid, though seldom hard or lumpy. Essentially must the prospect of cure depend on the character of the hepatic lesion, which is diversified in kind and degree. For the treatment, I shall be content to refer to what was said of the functional variety of this affection, it being very nearly the same.

Constipation remains to be considered which proceeds from mechanical obstructions of the bowels, owing to accumulations of foreign matter or fæces, or to organic lesions, or adventitious growths of several descriptions. Thus, among other instances of the former which might be cited, Koning, of Berne, relates that of a woman who had her intestines loaded with stones as hard

as flint, of every size, from a pea to a filbert, the clashing of which could be distinctly heard. These were finally voided. Brande and Graves each, gives cases of similar obstruction from magnesia, cemented into a large ball by the mucus of the intestines;—and Elliotson another, by a lodgment of the carbonate of iron, both of which articles had been long and largely used. Two instances I have met with in my own practice, the first from cherry-stones, and the second from the coagula of milk, in the former to the amount of a double handful, and in the latter to nearly eight pounds. The latter was mentioned under the head of dyspepsia.

The fæces sometimes accumulate in distinct indurated scybalæ, or in enormous masses solid and compact. Taunton, a surgeon of London, has a preparation of the colon and rectum of more than twenty inches in circumference, containing three gallons of fæces, taken from a woman, whose abdomen was as much distended as in the maturity of pregnancy. By Lemazurier, another case is reported of a pregnant woman, who was costive for two months, from whom, after death, thirteen and a half pounds of solid fæces were taken away, though a short time before, between two and three pounds had been scraped out of the rectum.*

Cases are reported by Professor Graves of Dublin, which he saw in women, where from the great distension in certain directions of the abdomen, the one was conjectured to be owing to a prodigious hypertrophy of the liver, and the other of the ovary;—in the latter of which he removed “a bucket full of fæces in two days.” Mr. Wilmot of London has recently given a case, where a gallon of matter was lodged in the cæcum, and the intestines perforated by ulceration. I have seen several such of the rectum.

Constipation of this kind is incident to females mostly;—and, with the ordinary phenomena of the condition already noticed, there is associated much local uneasiness, with which the uterus sometimes so greatly sympathizes, that it may be mistaken for an affection of that organ. The pain and distress are very similar to that endured in the worst forms of difficult menstruation. The connection of the rectum with the uterine system, and its dependencies, is, indeed, of such an intimate nature, that we are told, in some instances, from the mere irritation of this portion of

* Archives Générales, Tom. IV., p. 410. Paris, 1824.

the bowels, by habitual constipation, the womb enlarges, the mammæ swell as in gestation, and finally secrete milk. Diarrhœa is occasionally an attendant on these cases, which renders them perplexing, or may lead to a total misapprehension of their nature. It is caused by the irritation of the indurated fæces worrying the bowels to increased secretion or exhalation.*

In the management of this variety of constipation, it may be necessary from the mass of indurated matter, to remove it by a scoop, adapted to the purpose, or by the handle of a spoon, and then administer the aloetic preparations, variously compounded, so as to make a specific impression on the lower bowels.† Ene-mata, however, will sometimes supersede purgatives;—and, in this particular instance, an infusion of horse-radish, or mustard, merits attention. By the introduction of a suppository of tobacco into the rectum, to remain for a short time, I have known speedy relief to be afforded, and, from the daily repetition of the remedy, some cures effected. But, inasmuch as a portion of these cases is referable to paralysis of the bowels, we ought to be mindful of the fact, and be governed accordingly in the management of them.

Constipation, I have said, may be occasioned by structural lesions of the bowels. These consist of thickening of the coats of the tube especially about the ileo-cæcal valve, from previous inflammation, or tumours of various kinds, or strictures which diminish its calibre, in various gradations, to nearly its obliteration. The latter alone being susceptible of any effective management, will exclusively engage my attention. The stricture is commonly seated in the rectum, though sometimes also in the colon.

On its attaining maturity, the symptoms of the case are pretty much those of torpor of the lower bowels, and particularly of the rectum. There is local uneasiness, or positive pain, with distension of the abdomen, oppression of the stomach, flatulence, eructations, colic, frequent vomitings, sometimes even of stercoraceous matter, micturition, or entire suppression of urine, and occasional diarrhœa from irritation of the intestine. Considerable aches in the groins, loins and lower extremities, are also experienced, and

* Fothergill's Works, Vol. II. p. 100.

† R.—Pulv. Aloes, ʒi.; Jalap. ʒss.; Calomel, gr. x.; Extr. Colocynth. Comp. gr. xv.; Pulv. Ipecac. ʒi.; Sap. Hispan: q. suf. Ft. mass. Div. in pill. xl.

in some instances, confirmed dyspepsia ensues, attended by violent paroxysms of headache, palpitations of the heart, interrupted pulse, and syncope;—the latter affections most probably induced by the pressure of the accumulated contents of the colon on the vena cava, or aorta.

In the progress of such a case, when the stricture degenerates into scirrhus or ulceration, a new train of symptoms arises of a less equivocal character, and finally the whole system becomes involved in universal cachexy, and death takes place after long and excruciating sufferings.

Two circumstances will aid us in distinguishing this from any other form of constipation, and especially when the stricture is somewhat advanced. There is an unusual degree of tenesmus with excessive straining, and the indurated fæces conform in their shape to the figure of the aperture through which they are squeezed, being generally either flattened and elongated like a piece of tape, or triangular, or cylindrical, with a distinct indentation in the centre, from the compression of the stricture. Yet, though generally, this peculiarity of the fæces does not always, exist. They sometimes come away in small balls, snapped off by the stricture. In other cases, the stricture being above the rectum, the fæces pass through it, and become subsequently moulded, or collect in a large lump, to which may be added, that, on the operation of purgatives, though the discharge may be copious, relief is not always afforded—the sense of a retention of a load above the stricture, continuing to harass—to further efforts for its expulsion.

Notwithstanding, however, these diagnostics, I have known several times the most serious blunders to be committed. It will be right, therefore, where embarrassment exists, to make an actual examination, which, for the most part, is easily done as regards the rectum, by the finger, or if not within its reach, by a bougie. Even when high up in the colon, this same instrument may enable us to detect the stricture. But such cases enter into the province of surgery, to which I resign them with this single comment, that they are of more frequent occurrence than generally suspected, and hence deserving of careful attention.

Essential to the cure of constipation, is the regulation of the regimen. As to diet, all articles of an astringent nature are to be avoided,—solid animal food to be sparingly allowed, and the

aperient vegetables and fruits most freely used. Crackers are particularly injurious, and the best bread is that made of unbolted flour, or bran bread, as it is called. Dried fruit, figs, or prunes, or peaches, the two latter stewed, are very suitable, and so is corn or rye mush and molasses. The best drink is syrup and water, or simple water—and above all, ardent spirits and port wine are inadmissible.

It will be right to insist on a change of the habits of indolence, or sedentary employments, for moderate exercise, especially by walking.

Further, with a view of soliciting the restoration of the natural office of the bowels, we should recommend a daily effort to be made to procure a stool, whether an inclination is felt or not, by repairing to the ordinary place for this purpose;—and while thus engaged, the process may be greatly promoted by kneading the belly for some ten or fifteen minutes. It is a common remark that we are the creatures of habit, and, perhaps, in no instance, is it more strikingly illustrated than in relation to the case before us.

Lastly, be it remembered that constipation is one of those affections, over which the waters of several of our mineral springs have a very extraordinary control. Those of Saratoga, New York, of Bedford, Pennsylvania, and the White Sulphur, of Virginia, are of the highest reputation. But I am inclined to believe that the water of the Warm Springs, in the vicinity of the latter, is more efficient as a purgative, and from the advantage of its incomparable bath, peculiarly adapted to that form of the disease in which the nervous system is concerned. Nor are those of the Hot Springs, of the same neighbourhood, without decided utility. Be their comparative merits as they may, they all afford so valuable a resource, that I have known them in some instances to render great, or even entire relief, where our skill had proved nugatory.

ON
SOME OF THE DISEASES
OF THE
LIVER.

No organ of the body, is much more curious or interesting in several respects, than the liver.

Like the stomach, it belongs to nearly every class of animals, and on account of its early development, its immense size, the peculiarities of its circulation, its intimate sympathies, as well moral as corporeal, and above all, from the high functions it performs in the animal economy, it is of our complicated and wonderful machine so important a portion, that its derangements deserve the utmost consideration.

HEPATITIS, OR INFLAMMATION OF THE LIVER.

Commencing with this, I shall, successively, bring into view the other affections, which are to claim my attention.

This disease comes on, for the most part, with the ordinary symptoms of pyrexia, such as chilliness or rigors—followed by flushes of heat, and finally fever. Nausea and vomiting are apt to take place, sometimes of bile, though oftener at first, of tough phlegm—and I have seen it of dark granulated matter, or of a perfect fluid of the same colour, or there is only a sense of epigastric or præcordial uneasiness, attended by deep sighing, and considerable jactitation and nervous wretchedness. The bowels are mostly torpid, and the discharges small and costive, indicative of deficiency of biliary secretion, or a diversion of the fluid upwards,

in consequence of puking, or, as may happen, some form of the intestinal fluxes prevails.

Concomitant on one of these conditions, or immediately succeeding to it, there is pain in the right hypochondrium, sometimes pungent, and in other instances dull, with feelings of fulness and weight—and on pressure, or from a deep inspiration or cough, an increased sensibility is betrayed.

The pain sometimes extends to the right clavicle, or to the top of the shoulder blade, and I have known it to be felt exclusively, and often more acutely there, than even in the region of the liver.

Cases, however, occur, and especially in women, where all the sufferings of the primary as well as the secondary affection, is in the opposite side, and here, probably the seat of the lesion is in the left lobe of the liver.

Commonly, the fever becomes high, with a strong, full, disturbed pulse, hot dry surface, foul coated tongue, bitter taste, much thirst and headache—and after a few days, the skin may be tinged of a dusky or bilious hue, in which latter the adnata participate,—and the urine, which is reduced in quantity, is of the various shades of yellow to a deep saffron.

The liver is now sometimes so swollen, and tender, that the patient can lie on neither side, though he is most disposed to turn on that affected, as the least uncomfortable, being thereby relieved, in a degree, from the weight and oppression of the distended organ. Tenderness occasionally pervades the whole abdomen, owing to the extension of the inflammation, from the peritoneal covering of the liver, to that membrane generally. But I have seen hepatitis where there was no pain in the affected part, or at the shoulder, no sallowness of the cutaneous surface, or of the eyes, and very little aberration in the pulse. Greatly is the disease diversified by climate, and very prone is it to exhibit irregular and anomalous symptoms. Especially in India, its onset is sudden, sometimes without any premonition, and its course much more rapid and vehement, running to suppuration in a few days, and in some instances, without any distinct expression by pain or fever. The action is said to be rather congestive, with a mixture of inflammation, than actually inflammatory.

Nor is it uncommon for an attack to be ushered in and associated throughout, with the phenomena of diarrhœa, dysentery, or cholera morbus. Cases of the disease have also come under

my notice, assuming the guise of gastritis or pneumonia, or to expend apparently their force entirely on the head, producing the most relentless agony, with great mental disorder, or in the kidney, or at the umbilicus, or in the calf of the leg, with a numbness of one or both arms.

Cullen, and indeed most writers, have endeavoured to explain some of these deviations from the common order in the phenomena, on the supposition, that in such cases, different portions of the liver are affected.

Thus it is affirmed, that when there is a predominance of pectoral symptoms, the convex surface is inflamed—and conversely, if much gastric uneasiness prevails, the concave. It is also alleged, that the disease is modified, as the membranes, or parenchyma of the organ may be the seat of the affection. No doubt such is the fact. The peritoneal covering or ligaments being phlogosed we shall have sharp, acute, lancinating pain, with a hard, corded, small pulse, and a white furred tongue, without the sallow hue, or vitiation of the biliary secretion—and very much the contrary, when the substance is phlogosed, or dull, obtuse sensations, with a fuller and slower circulation,—a brown or yellow, and more heavily loaded tongue, and an excess, or suppression or depravation of bile. But in most instances, each structure is involved, so that the phenomena become confounded. It is questionable, indeed, whether distinct inflammation of the peritoneal covering or of the ligaments, ought to be considered as hepatitis. More properly it appertains to peritonitis. Be this, however, as it may, it must be admitted that the disease may be either superficially or deep seated, and the propriety of these two forms of it being distinguished by the terms *sero* and *puro-hepatitis*, as lately proposed,—or when thus existing of their being characterized by different degrees of pain, as well as the other symptoms mentioned.

An acute phlogosis of the liver itself is, for the most part, and always when intense, rapid in its progress, and if a decided impression be not made on the case, we shall perceive in a few days, either a sinking of the vital forces, or the signs of suppuration taking place, or a tendency to chronic degenerations.

Men, it is said, are much more liable to the disease, than women—and that it rarely shows itself in children.

The latter remark, however, is not of universal application.

Children in miasmatic countries, are singularly subject to it, especially in the subacute, or chronic shape—and I suspect, that the greater number of cases among men, under ordinary circumstances, is referable only to their depraved drunken habits, or greater exposure to its other or external causes.

In common with the phlegmasiæ, hepatitis may be excited by the sudden vicissitudes of weather, cold succeeding to heat, especially, or by mechanical injuries, as blows, falls, raising heavy weights, &c. Not an uncommon cause is the abuse of ardent liquors, or excess in eating, particularly of high seasoned or gross food. The former is insisted on, while the latter is too generally overlooked.

Detrimental as intemperance in drink undoubtedly is, in this and other relations, I presume that our well being is not less affected by gluttony, and that the good of society as much requires an institution for the reformation of the gourmand, as the drunkard. The inconsistency of mankind, sometimes very extraordinary, has rarely been more strikingly illustrated, than in this very instance. It might be instructive to listen to the denunciations of our modern moralists against whiskey potations in particular, were they not so often accompanied by the belchings of the fumes of ill digested turtle, or of luncheons of roast beef.

As to hepatic obstructions, I am quite sure, that such a course of living is a most prolific source. By Shakspeare, the closest of observers, we are told :

“It engenders *choler*, planteth anger.
And better ’twere, that both of us did *fast*,
Since of ourselves, ourselves are cholerick,
Than feed it with such overroasted stuff.”

Temperance, I repeat, consists in moderation as well in eating as drinking, and he who wishes to preserve health or decency must alike restrain the “lusts of appetite,” in each respect.

Milton has truly said :

“If thou well observe
In what thou *eat'st* and *drink'st*, seek from thence
Due nourishment, not gluttonous delight,
Till many years over thy head return :
So may'st thou live, till like ripe fruit thou drop
Into thy mother's lap, or be with ease
Gather'd, not harshly pluck'd, for death mature.”

But of the physical agencies, perhaps the most operative are heat and miasmata. That the former alone produces the disease, I am aware has been disputed. Not to repeat, what has been so often discussed, the influence of a high temperature in deranging the chylopoietic viscera, I have now only to state a fact of the effects of heat on the liver. The "paté de fois gras," so delicious to the epicure, is made chiefly of the liver of geese, and it is well known, that at Strasburgh on the Rhine, where this celebrated pie is prepared, the practice exists, with a view of giving a preternatural growth or hypertrophy to the liver, of placing a goose for some hours before a fire, and that even within so short a time this organ is enormously swollen in its dimensions. As cold deranges the pulmonary, so does heat the hepatic apparatus, and each state of temperature is similarly distinguished by the variety of morbid conditions into which it respectively throws these organs.

But to occasion hepatitis to any extent, excessive heat seems to be demanded. Comparatively, we have little of it in our most Southern States,—much more in the Antilles, and above all in the East Indies. Circumstances, not always intelligible, belonging to particular localities exercise great influence, independently of temperature, in the production of the disease. For instance, the Islands of the West Indies having the same climate, differ very materially in this respect. Combined with miasmata, its operation is certainly increased, so much so that the disease is often endemic in such an exposure. We have examples of it in our own country, and still more strikingly along the coast of Coromandel, and in the alluvial districts of Bengal.

Nearly as much are brute animals liable to it in such situations, and particularly cattle and horses. Born under the morbid influence, they as the human species are less affected by it, though neither has an entire immunity. By some of the oriental writers, it is stated that animals in common with man, brought from Europe, speedily fall victims to it in large numbers, and I am told, it is equally so in relation to our Southern states. Exactly the opposite holds as to pulmonary affections, or the natives of the warm, the human and the brute, suffering in this way, on a translation to a cold region.

In medium climates, hepatitis is seen chiefly in sporadic occurrences, and in its mildest presentations. As to this city and

vicinity, I know this to be true, and have reason to believe it to be the case in most of the United States, and western Europe. But on some occasions it is otherwise, and hepatitis breaks out, and spreads extensively and violently. An instance of this kind happened in Ireland in 1818, where it previously had sparsely existed, the disease very frequently ending in abscess, such was the force of its character,—and with us, during the existence of the epidemic constitutions, causing yellow and intermittent fever, the same was observed both as to the human species and animals, cattle and horses especially suffering, with what was called the yellow water, I presume from the urine having that colour, a febrile affection occasionally terminating in suppuration of the liver.

Certain mental emotions may also be included among the causes of the disease in the human subject. Exasperated anger, or terror, or jealousy, irritate and distend the liver, promotive of an increased secretion—while fear, grief, or other depressing states, have an opposite effect.

The ancients were aware of the operation of jealousy on the liver, and the correspondent irritability and fractiousness induced.

Does not every classical scholar remember the lines of Horace?

“Cum tu, Lydia, Telephi
Cervicem roseam, et cerea Telephi
Laudas brachia, vœ, meum,
Fervens difficili bile *tumet jecur.*”

Even temper and character have such an influence on the organ, that to call the sour, the envious, and malignant, a white or lily-livered fellow, has grown into a common phrase.

No less remarkable is it, that most of the complaints of the lungs, cheer and preserve the spirits, while those of the liver induce dejection, gloom, and melancholy.

The very term *hypochondriasis*, is derived from the notion of antiquity, that it depended on some affection of the hypochondriac regions, and melancholy, from the Greek, signifying black bile. Between the brain and the liver, there would seem indeed, to be as close a physical as moral sympathy. We know how much the former shares in all the diseases of the latter, and which is fully reciprocated. Concussions and other injuries of the brain have often been followed by suppuration of the liver, and con-

versely, lesions of the liver reflected on the brain. By the metastasis of gout, and still more frequently from the suppression of hæmorrhoids, though neither event is very common, this disease is occasioned.

No very great difficulty is there usually in the recognition of acute hepatitis.

The disease with which it might be supposed most readily to be confounded, especially when the left lobe of the liver is affected, is splenitis. But this is of such rare occurrence, that even its very existence has been doubted, and of which I, at least, have never seen an instance.

Hepatitis might, in the commencement, be mistaken for gastritis, so greatly is the stomach irritated and disturbed occasionally. It will indeed be presently shown that it nearly always has its origin in this latter viscus. But after a while, the morbid action becoming more concentrated in the liver, the phenomena are less confused or ambiguous. Equally may phlogosis of that portion of the colon approximating the liver be confounded with hepatitis. Yet by a careful examination, they are to be discriminated, and among the signs none perhaps, is entitled to greater confidence, than the imperfection of the process of fecation, when the intestine is concerned.

This disease is sometimes imitated by pneumonia. An accurate comparison, however, of the phenomena of the two complaints, will generally dissipate the obscurity. Even the pain, the cough, and impeded respiration, the symptoms which cause the perplexity in these cases, are not similar in all respects. They are in hepatitis, less prominently marked, and seem rather the result of secondary, than primary irritation of the lungs, and at the same time, we have direct expressions of hepatic disturbance in the gastric distress, the tenderness on pressure, with the peculiar appearance of the skin, and of the alvine and urinary discharges. No implicit reliance can be placed on the pain of the shoulder, to which such importance is generally attached. It is very frequently wanting, and when it does occur, is said by Louis to be more indicative of pulmonary than hepatic disorder, in which opinion, I do not concur. But, in the external means of exploration, percussion and auscultation, there is always a key to unlock the chest and expose it, as it were, to view. It may be further remarked, as strongly denoting hepatitis, that soon after the blood is drawn, or prior to its coagulation, it is of a dull green

colour, and on the separation of its constituent parts, the surface formed of the size or lymph more particularly, is yellow.

An attack of acute hepatitis, ending favourably, or by resolution, is often distinguished by some critical discharge, as copious hæmorrhage from the nasal or hæmorrhoidal vessels, or profuse perspiration, or urinary, or alvine evacuations, or by erysipelas, the internal irritation being thus reflected on the cutaneous surface. Nature, however, not relieving herself in any of these modes, approaching convalescence is evinced by subsidence of fever, and topical pain, by tranquillity of the stomach, less constipation, and more bilious stools, with improvement of complexion.

An opposite conclusion is warranted, when such happy changes do not take place. Of the adverse terminations, one of the most common is in suppuration, and an abscess being formed, its contents may be variously evacuated. To have the matter pass out through the ducts is the most desirable, and next to this, externally. The abscess usually points over the region of the liver, though in one case it broke in the axilla.

As liable, however, is it to rupture inwardly, and here, unless the matter is thrown into the *primæ viæ*, the event is usually fatal. Most frequently it is emptied into the colon, though sometimes into one of the small intestines, or the stomach. Examples are recorded, where it opened into the abdominal cavity, proving mortal by inducing peritoneal inflammation or hectic fever. But such a catastrophe does not uniformly happen, we having instances where the fluid being absorbed, the event was favourable.

It is said to have burst into the thorax, the pus expectorated, and a final recovery, though, more commonly, suffocation has speedily followed such occurrences. Forty years ago, Dr. Pascalis, of New York, then residing in this city, was supposed to have survived under these circumstances, and similar instances are related by Annesley and other writers. But conclusions of this kind can only be conjectured, where no subsequent opportunity presents of an autopsic inspection. Expectoration of purulent matter does not afford positive evidence of the rupture of an hepatic abscess into the chest.

By sympathy the mucous tissue of the lungs becomes phlogosed, and secretes pus. Formerly, a case of this kind occurred

in our hospital, which, at the time, was thought very anomalous and perplexing. The patient died, having previously, for some weeks, expectorated pus freely, as was presumed, from an abscess of the liver communicating with the thorax. None, however, or even any adhesion, was discovered on dissection.

In a second instance of supposed hepatitis, the pus escaped with the urine, and, on examination after death, an abscess of the kidney was detected, the liver being perfectly sound.

Clarke mentions a case in which the matter escaped into the pericardium, and another of similar description is given by Smith of this country, to which a third has lately been added by Professor Graves, where the abscess communicated with both the pericardium and stomach—all three, of course, proving fatal.

From what has been said, much may be collected of the curability of this disease. Nearly always, with us, when timely and vigorously treated, it submits to our remedial processes. But under different circumstances, it proves otherwise very generally, by suppuration, or other organic lesions, which, sooner or later, terminate or embitter existence by the sequelæ entailed.

Louis says, that recoveries never happen where an abscess forms. Numerous as his examinations were, he met with no instance of cicatrization, or a tendency to it. But such negative testimony must not be received as conclusive, against the positive experience of many respectable authorities. Two instances of recovery I have known myself. The first of these was in the captain of a ship in the India trade, and the second, in a lady of this city, both of whom, had unquestionably abscess of the liver, and were permanently cured, after immense evacuations of pus, upwards and downwards.

On a post mortem inspection, we find the liver more or less enlarged, and in those instances, where the serous covering is implicated, marks of phlogosis, which consist mostly of extravasations of lymph, less adhesive than usually, and with little disposition to become membranous, or to form attachments. Yet, it sometimes does, or at least, adhesions have been reported through the medium of the peritoneum, with all the adjacent parts. Externally, the liver itself is of a livid, red, or marbled aspect, and what is observed on dissection of it, may, perhaps, be embraced under the several states of increased vascularity, softening of texture, suppuration, and gangrene. Commonly, the lesions are on

the surface, though often also in the very substance of the viscus. Each portion may be independently affected, or both unitedly.

Death taking place in the early stage, the vessels are turgid with blood, productive of redness and swelling of the organ. Connected with these, in the second stage, the substance is brittle or friable, and being squeezed between the fingers, seems to be granular, though readily reduced to a pulp—and such is sometimes the ramollescence, that it is almost deliquescent. When the case is still further advanced, the texture is changed from a reddish to a yellowish hue, by the presence of pus, which gives to it this colouration. The purulent matter is diffused through the cellular structure, or collected in several small, or one large, or even enormous abscess. But instead of pus, it may be a heterogeneous fluid of a dark grayish colour, or resembling the washings of flesh, with flakes of blood in it. Genuine purulent abscesses are seldom met with in the temperate climates of Europe, or in this city. Louis states, that in four hundred and thirty dissections, he detected only five in the substance, and not one in the coverings—and suspects that the latter occurring, it is in the cellular membrane, between the peritoneal investment and the glandular structure of the organ.

Bichat asserts, that gangrene of the liver may take place, and which, though rarely, has been subsequently observed by Andral, &c. Never have I seen it, or heard of its being seen, in our investigations in this city in private or public practice. No one, perhaps, has had greater advantages than Annesley, in determining this point, from his long residence in India, the region most prolific of the disease, and from the ardour with which he seems to have cultivated its pathological anatomy. But never meeting with it, he is disposed to infer, that what has been apprehended to be gangrene, was the black congested and softened state of the viscus, incident to very violent attacks of the disease, or to a putrid condition induced after death, which conjectures, I think very probable, as such appearances I have witnessed from each of the causes he alleges.

Besides the phenomena already noticed, it is not uncommon to remark inflammation, with other lesions, of the mucous lining of the gall bladder, and the biliary ducts,—frequently, also, of the stomach and the duodenum, and in some rare instances of the entire track of the alimentary tube, as well as of the peritoneum

and other portions of the abdominal viscera. Nor does the brain, especially where much cerebral disturbance has prevailed, escape—it betraying, on the contrary, sometimes, all the manifestations of extreme sufferings.

Excepting the peritoneal covering, or ligaments are primarily engaged, where it may be otherwise, I believe, that in common with every other real hepatic affection, an inflammation of the liver not occasioned by some act of violence, has its original seat in the stomach. An irritation is first given to the mucous surface of that viscus, and continuously, or by consent of parts, becomes extended to the duodenum, ductus choledochus, and finally, into the more intimate structure of that organ. On these pathological views, I shall not expatiate. Enough may it be for the present to state, that I am led to this conclusion by the history of the causes, their nature and mode of operation, the early symptoms, and appearances on dissection in hepatitis, when it terminates suddenly, and from its close analogy to the affections, which are undoubtedly of gastric origin. Many instances indeed of it come on in the form of gastritis, or diarrhœa, or dysentery, showing clearly that the liver is not here, at least, the seat of the first link in the chain of the morbid process. No pathological fact is better established, than that an irritation at the mouth of any duct, is speedily transmitted throughout its ramifications, with a tendency to involve all structures with which it may be connected.

An effect of this hepatic irritation, is a fluxionary movement, productive of more or less congestion of the portal circulation, by which the liver is distended and enlarged, followed usually by inflammation, with sometimes, ultimately, those diverse disorganizations incident to the case. From a concentration, however, of the morbid action of the liver, the original, or initiatory disturbance of the *primæ viæ*, is often relieved or becomes so subordinate as to be concealed or masked in many cases, though it may be different, or the whole series of affections from the first to the last, uninterruptedly maintained, and conspicuously exhibited. This is essentially the doctrine of Broussais, in which, however, he was anticipated by me, by many years.

The treatment of acute hepatitis is now generally understood, and pretty well defined. We have a case of active inflammation in a voluminous and important organ, which can only be arrested by prompt, vigorous, and decisive measures. Of these, incom-

parably the most effectual is venesection. Not to be dispensed with in any severe parenchymatous phlogosis, it is here peculiarly serviceable from the intimate connection of the organ with the venous circulation. The lancet, in many instances, is to be freely urged, and the operation to be repeated day after day, in vehement forms of the disease. Nor am I aware that in cases of a more congestive character, provided it be active, venesection should not be carried to the same extent. As vindicating the practice, it may be stated, that on the loss of blood in either state, a manifest subsidence of swelling and tenderness of the liver takes place, with a correspondent general improvement of condition.

Much may also be expected from topical bleeding, by cups or leeches, which, however, is more especially useful where the pain is acute, and dependent on inflammation of the coverings of the organ. It is customary to apply the leeches over the seat of the affection, and they answer very well here. But some of the recent writers insist that they prove still more efficient, when put around the anus. Considering the greater intimacy of connection of the vessels of this part, with the portal circulation, it is not improbable, and which indeed is confirmed by the decisive results of the hæmorrhoidal flux in such cases. But then to prove so efficacious, the phlogosis or congestion must be seated chiefly in the substance of the liver.

Emollient cataplasms, or fomentations in any way to the affected side, are sometimes productive of great relief.

On adequate reduction of vascular excitement, the application of blisters becomes highly important.

Nevertheless, while using the lancet, and its immediate auxiliaries, we must not neglect some other means. It is confessed, on all hands, that where the stomach or intestines are not actively inflamed, purging is immensely serviceable. Calomel is the proper article, exhibited at night in a large dose, and worked off the next morning with Epsom salts or castor oil. To purge freely in this case, is of peculiar importance. The liver, while phlogosed, has also its secretory function suspended or impaired, and though the former state may be subdued by the loss of blood, the cure will not be accomplished till the latter is restored. It has been justly remarked by Johnson, that the liver under such circumstances is like the female breast gorged with blood and stagnant milk, and unless the lactiferous ducts are emptied of

their contents, suppuration will ensue, in spite of general or local bleeding and other means. Exactly so with regard to hepatitis. The biliary ducts must be emptied of the viscid and vitiated bile, by which they are obstructed, and the healthy secretion reinstated, or suppuration, or chronic disorganization, will take place. Now, to meet this indication, calomel, above all articles, is appropriate, it emulging the liver, and promoting its natural offices. Though many other purgatives will evacuate the bowels, it is the mercurial preparations only, that thus operate efficiently on the hepatic apparatus. Concurring in the design of subduing the febrile state, the antimonials, or the nitrate of potash, alone or combined, the neutral mixture, or any other mild febrifuge, may be usefully interposed.

Next, salivation is usually endeavoured. It has, however, been made a question by some, whether we should resort to it at the onset, or wait for the reduction of the phlogistic condition. But in my opinion, there can be no doubt of the preference of the latter course. To do otherwise, would indeed be, for the most part, nugatory—since, while there is much vascular excitement, mercury will rarely act, and, if it succeed, it only has the effect of exasperation, by the irritation it induces, preventive of the resolution of the phlogosis. Yet in India, pretty generally, and occasionally in our own climate, an opposite practice is pursued. The expediency of salivation, under any circumstances, or at any stage of acute hepatitis, is very doubtful with me. Nor is this view peculiar to myself. By a late writer of great authority on the diseases of India, the following language is held. He says, “I am anxious in the acute affections of the biliary organs, to avoid the constitutional effects of calomel, because, I believe, that when these are produced, the energies and vital resistance of the system are thereby impaired, and the presence of this mineral in the circulation tends to keep up in the inflamed part, a degree of excitement and irritative action, which would otherwise subside, and which I am persuaded tends in many instances, when allowed to proceed, to occasion chronic derangements of the viscus, and even abscesses, if the inflammation be seated in the glandular structure of the organ.”* Conformably to my own experience, it is far better in every respect, at this period of the

* Annesley, p. 424.

case, so to manage mercury, as to attain its alterative, or revolutionary effect on the secretory functions, and which is to be done by small doses of calomel, or the blue pill, with opium and ipecacuanha, occasionally resorting to a mild laxative.

No plan of cure, however, will uniformly succeed—and, in defiance of our exertions, suppuration may ensue. Yet this event, though common in the intertropical and other very hot regions, is rare in temperate climates, and with us, may almost invariably be traced to negligent, inadequate, or no treatment at all, among the poor and vicious classes of society. The suppurative process is usually denoted in its approach, by an increase of pain, and sense of weight, and enlargement in the affected part—by a full, hard and active pulse, and the indications generally of more violent excitement.

Being completed, and especially an abscess existing, there is a remission of pain, or rather, it is exchanged for a dull, obtuse sensation, or, as occasionally happens, throbbings, or pulsating sensations, and, at the same time, there are rigors, with irregular exacerbations of fever, attended by flushes of the face and nocturnal sweats. Three heteroclyte symptoms now and then occur, in this state of the disease. These are, a feeling of formication throughout the skin, an inability to sneeze, even when the strongest sternutatories are applied, and numbness, or loss of motion in one, or both of the lower extremities.

Even in the suppurative stage of the complaint, mercury has been recommended, without, however, any advantage. It is a fact, not generally known, though I have seen it abundantly verified, that mercury will hardly operate specifically in any disease, during the suppurative process, and which is strikingly exemplified in venereal buboes, where it exercises not the slightest influence. The two actions are incompatible, or that of the remedy is too feeble to overcome the morbid one.

An abscess may take such a direction inwardly, as not to be recognized. But pointing externally, so as to be perceptible, it should be matured by poultices, and then punctured. Cures, when the matter is thus let out, often follow, and very seldom, if it be permitted spontaneously to discharge. This is in conformity especially with the observations of the East India writers, and, perhaps, is readily explicable. By timely evacuating the con-

tents, disorganization is arrested, which otherwise becomes irreparably extreme.

From an indisposition to adhesion between the liver and parietes of the abdomen, the operation, however, is alleged to be not always safe, as an escape of the fluid into the peritoneal cavity may take place, and hence it is deemed prudent, previously to performing it, to endeavour to secure such adhesion. The expedient, hitherto adopted with this view, has been the establishment of a caustic issue over the affected part, which having failed in several instances, and death consequently resulting, is now much distrusted. It is proposed, as an efficient substitute, to make an incision at the most prominent point, down to the peritoneum, keeping open the wound by pledgets of lint, and I have heard of some instances of its complete success. But though suggesting this new expedient in the case, it may be right to mention, that I have myself, or seen others operate in several instances, without regard to it, and no detriment accrued, the adhesion being perfect.

The abscess having been emptied in any way, or, indeed, while the matter remains, there is usually much debility and irritation, and the system is to be soothed by opiates, and sustained by a cordial, though mild diet, with the aid of tonics, particularly the nitric, or nitro-muriatic acid, which under such circumstances, may prove highly serviceable.

Need it be remarked, that during the inflammatory stage, the regimen ought to be strictly antiphlogistic, to be continued in the convalescence, and for a considerable time afterwards, with very little change, and, to prevent a relapse, the patient, when practicable, should remove from a miasmatic district, and forever abstain from gross, or stimulating food, and above all, alcoholic liquors.

CHRONIC HEPATITIS.

It has hitherto been the custom, from the vagueness of information on the subject, to include under this denomination, nearly every protracted lesion of the liver. Granting, that most of these affections originate from, or acquire inflammation in their progress, it is no less true, that others are independent of it, through-

out all their stages, and hence, differing totally from them, in their pathology, and treatment. Even as to the former cases, the term chronic, as importing duration only, very imperfectly expresses the real condition, which is mostly that of subacute inflammation.

But a name is not of much consequence, when the sense is well defined, and may be adopted, or retained conventionally. As Shakspeare says:—

“What’s in a name? that which we call a rose,
By any other name would smell as sweet.”

Cullen would teach us to believe, that the difference in the two cases is owing to the investing tunic of the liver being phlogosed in the acute, and parenchyma, in the chronic state of the disease. But the explanation is utterly unsatisfactory, and has been accordingly long abandoned.

The fact is that, under such circumstances, we should have two distinct pathological conditions, the one an inflammation of the serous, and the other of the cellular tissue of which the parenchyma consists. But, as previously remarked, it is only the last that properly can be considered as hepatitis, the former being peritonitis. An hypothesis equally absurd has been advanced by Saunders, who supposes in the first, the system of the hepatic artery is concerned, and in the second, that of the vena portarum.

Chronic hepatitis is so diversified in its aspects, that it is not easy to delineate it, in any general description. Taken, however, in its most common presentation, there is considerable local pain, usually obtuse, though occasionally exasperated into intense agony, sometimes attended by the sympathetic ache about the clavicle, or scapula. Mostly, the weight of the liver is sensibly felt, and by pressure on the diaphragm may excite cough, or create embarrassed respiration. With these topical affections, we have an assemblage of phenomena indicative of general or constitutional disturbance, such as inveterately dry skin, of a dusky or icterose hue—often much depravation of the stomach, attended by a sense of fulness, costive bowels, and the stools clay, or slate coloured, inodorous, or very offensive—scanty dark urine, sometimes depositing a pink or lateritious sediment, or it is only turbid, from a mixture of mucosity, the whole accompanied by more or

less fever—the pulse being quick, firm and corded, or, as sometimes happens, is intermittent, and otherwise irregular, from a loss in the balance of the circulation, by the impeded movements of the blood through the infarcted liver. Consequent on this state, hæmorrhage is apt to occur from the liver itself—or the blood being otherwise determined, from the spleen, stomach, intestines, the lungs, and particularly from the nasal or hæmorrhoidal vessels. In the progress of the case, the bowels become harassed by tormina or flatulence, or colliquative diarrhœa ensues, the discharges being dark, or light coloured, slimy, or watery, or muddy, and very fœtid. Emaciation, henceforward, rapidly takes place, with œdema of the lower extremities, which with other effusions, leading to general dropsy, is one of the modes in which the disease very frequently terminates.

The development of the disease, however, may be slower or less perceptible, so as to continue for months, or even years, without any manifestation of its existence, save a sense of fullness after meals with flatulence, sour eructations, palpitations, drowsiness, a disinclination to exertion, costiveness, depraved secretions, restlessness, and disturbed sleep, resembling in the whole, original dyspepsia, for which it is usually mistaken, till the symptoms of hepatic affection are more unequivocally disclosed. Blended with this dyspeptic state, or independent of it, there may be in the advanced stage another train of secondary affections, as dry cough, or asthma, or other pulmonary lesions, or in some instances, a tremendous headache supervenes, recurring periodically, often eventuating, in children especially, in hydrocephalus, and, in more advanced life, in apoplexy or palsy. These are some of the ordinary aspects of the disease, which, however, are so infinitely varied, that it were impracticable, within any narrow limits, to delineate one half of its modifications.

Linked most intimately with nearly every part of the system, the liver, through the medium of its sympathies, either actually deranges them or simulates their affections. Extensive, too, as are these physical sufferings, our moral constitution is not permitted to escape. Even mania has been sometimes the result, and, still oftener, the deepest melancholy. Generally, however, the mind is gloomy, petulant, morose, despondent, the real being aggravated by fictitious afflictions, and by this reciprocal play of

mind and body, a state may be induced, of which the vulture feeding on the liver of Prometheus is no exaggerated image.

On the origin of chronic hepatitis, I have to remark, that it is frequently the acute disease abated, though not cured, running into degenerations, or a primary condition of the same kind may be brought on by the slow and feeble impression of the causes already enumerated, as well, perhaps, as by some further agencies.

Combined heat and miasmata, however, are considered the most productive of the causes, and which may be so in certain regions, sometimes inducing the disease directly, though oftener entailing it as one of the sequelæ of autumnal fever, particularly the intermittent form of it. But drunkenness is, perhaps, little less influential among the vulgar in some sections of our country, and much may be ascribed to indolent, sedentary and voluptuous habits—in the higher classes of society, particularly in regard to eating. With the Romans, in the advanced and degenerate ages of the empire, the liver of geese became a choice luxury, and, to give it an enormous growth, the animal was nailed through its feet to one position, and crammed with food. What was thus effected in the goose is unintentionally brought about in the lazy and gluttonous geese of the human family!! The same result takes place in cattle, hogs, and other animals, by high feeding in close confinement—they becoming what is called "*liver-grown*." Known to our farmers generally, the fact has been lately corroborated to me by the butchers of this city.

Nor can I help thinking, and on no slender grounds, that the extravagant use of mercury by many of our practitioners, in the treatment of autumnal fevers and other diseases, must also be assigned as a frequent cause of the chronic hepatic affections in some portion of the United States. More than any other article of the *Materia Medica*, at least, has it the power of exciting the actions of the liver, and it is a law of our nature, that all high excitement is followed by a correspondent degree of debility. From the circumstance of the prodigious employment of calomel in the cases to which I have alluded, amounting to several drachms daily, it seems to be no unreasonable supposition, that the hepatic apparatus, thus over-stimulated, should fall into collapse, and, in this condition of exhaustion, torpor to take place in the portal circulation, productive of congestion, eventuating in phlogosis, induration and other derangements. Doubtless in this

mode do miasmata and high temperature, separately or unitedly, and the habitual consumption of ardent spirits operate to the same effect. As confirmatory of this view, it is stated, by Dr. Somervail, a most respectable physician, of the South of Virginia, who has practised medicine for nearly half a century, in that section of the country, that till the introduction of mercury, a comparatively modern event there, into the treatment of autumnal diseases, hepatitis was hardly known, and subsequently, it has most widely prevailed. We have also seen, that it is the opinion of Annesley, whose opportunities of witnessing the effect were so ample, that the large use of mercury in the inflammatory stage of acute hepatitis, by an increase of excitement, has a tendency to induce chronic degenerations. That it occasions jaundice, most probably, by deranging the liver, will hereafter appear, as well on the authority of some cases which several years ago occurred to myself, as others, more recently reported, by highly respectable European writers, in support of the conclusion.

Be this however as it may, there can be no question whatever, that a very bad practice, in another respect, is a common cause of the disease. My allusion is to the premature and indiscriminate resort to stimulants and tonics, to the neglect of sufficient evacuations in our fevers—an evil which has immensely increased since the terror of typhus pervaded the nation. The abuse or misapplication of bark, wine, and ardent spirits, as remedies, I do believe has obstructed nearly as many livers and spleens as all the miasmata and heat of our climate. Nevertheless, besides these, this disease may be occasioned by secondary causes, as certain affections of the brain, or lesions of the heart, or of the viscera of the abdomen, or by whatever indeed impedes the portal circulation.

Carefully traced, the symptoms I have detailed, will for the most part, satisfy us of the existence of chronic hepatitis, and, as regards enlargement and induration of the liver, all doubt may commonly be removed by an actual examination, which is done by laying the patient on his back, his head low, and his knees drawn up, so as to relax the abdominal muscles, and simultaneously directing him to take a deep breath, to protrude the liver. Even here, however, some caution may be necessary in forming an absolute conclusion. It ought to be recollected that in early life, the liver is of such magnitude, as to descend considerably beneath

the margin of the ribs, and is sometimes hard and quite prominent. Not aware that this may be a natural state of the organ, it is often treated by old women, and other unskilful practitioners, and by very harsh measures too, as an hypertrophy of the viscus, vulgarly denominated *liver-grown*. Now, though long before puberty, the liver becomes so much reduced as to be completely shrunk under the ribs, it is, in some instances, the reverse, or retains its original relative dimensions. The recognition of the organ in this position, therefore, does not of itself, entitle us to infer, even in the adult, any pathological condition of it, and still less so in childhood.

But this organ may be much diseased without any enlargement, and even preternaturally diminished, so as not to be reached by any examination. Even the *tactus eruditus* will, in this application of it, fail. Nevertheless there is one circumstance, without implicitly relying on it, which I think entitled to great confidence. In every case of atrophy of the liver I have inspected, it had been marked during life by extraordinary pallor of skin, even of pearly whiteness, or more of the hue of dingy white wax, exhibiting altogether an extreme exsanguineous condition and aspect. That an extreme penury of red blood, the latter supplying the nutriment of organs, should lead to such an effect, is plausible in itself, though it is not so obvious why it is displayed more conspicuously in the liver. Yet peculiarities may be traced in the economy of that viscus, which might be made, perhaps, to account for the phenomenon.

Nor is the preceding the only source of perplexity. As incident to the liver as perhaps any organ, is a painful condition, entirely independent of phlogosis, which, from the analogy of some of the symptoms, might be misapprehended. It has hitherto been called hepatalgia, under which term is embraced nearly every *liver pain*, on whatever state it might depend, as the irritation or spasm, of biliary calculi, &c. Caused in any of these modes, there is little difficulty of discrimination, and, passing them over, I shall confine my remarks to an affection purely a neuralgia or nerve ache. Even, however, as to this pathological condition of the nerves, it may suffice, at present, to state that its prominent and peculiar features are the acuteness, the darting, fluctuating, and periodical nature of the pain, with the absence of fever, and

other material hepatic or constitutional disturbances, in all which particulars differing from chronic hepatitis.

Diseases of other parts, however, may be mistaken for this of the liver. Chronic gastro-duodenitis, as well as the lingering inflammations of the colon, are of this description. Many of the cases of supposed hepatitis, on which I am consulted, turn out on examination to be intestinal lesions, and particularly of the arch of the colon, which latter indeed, I am inclined to suspect are far more common in every portion of our country than those of the liver. These lesions have, to some extent, a commonalty of symptoms, and hence the obscurity of the diagnosis. There may be pain in the right hypochondriac, sallow complexion, much gastric disorder, hectic irritation, and great vitiation of the alvine, as well as the urinary discharges, in the whole of which, resembling chronic hepatitis.

Called on to pronounce the most certain criterion, I should say as I have previously done, it may be found in the character of the stools—those in hepatitis generally indicating the absence of bile, while the evacuations in colitis as uniformly betray the loss of the faculty of *fæcation*. This discriminating sign is, however, sometimes fallacious. The liver though much diseased, may be sufficiently sound in a part to secrete bile, and the colon so partially affected, as to elaborate some *fæces*. To show the difficulty of the diagnosis, I will mention a case. It was that of a man brought into the Alms-House Infirmary, with nearly every symptom of chronic hepatitis. He had previously been treated for such, by one of our best physicians, who, supposing an abscess of the liver, pointing externally, punctured it, and let out about three pints of pus. The man dying soon after his admission, we found, on opening him, that the arch of the colon, in the right hypochondrium, had adhered to the parietes of the abdomen, forming a large sac, filled with pus, the liver being perfectly healthy.

Not more can be affirmed, with certainty, in regard to the prognosis, than that a considerable portion of these cases is curable, though only when the lesions are slight, and of no very long existence. Extensive, and confirmed injuries of structure are irremediable. Yet it often happens, that life is indefinitely protracted, where the liver is greatly affected, owing to a part of it

remaining sound, and adequately performing the function of the secretion of bile.

The liver is found on a post-mortem examination, generally of a gray, or ashy hue, and altered in shape and dimensions, as well as texture, sometimes prodigiously enlarged, or conversely, wasted to a very diminutive size, pale and exsanguineous, so that as expressed by an old writer, "If he were opened, and you find so much blood, in his liver, as will clog the foot of a flea, I'll eat the rest of the anatomy."

The organ in these diverse states, may be preternaturally hard or soft, tuberculated or interspersed with a collection of cysts or hydatids, or of small abscesses, or one or two large ones, the latter among us here, more common in the chronic, than the acute disease, the fluid contained being purulent, or sanious, or caseous, or in place of the preceding lesions, the substance of the viscus converted into a cheesy, steatomatous, adipose, tallowy, melanotic, scirrhus, cartilaginous, osseous, or granulated matter. It might be interesting, had I time, to describe each of these states, which, however, I the less regret, as the amplest information may be procured from several publications on the subject. I can now pause only to remark, that the last enumerated, the granulated condition, is particularly curious, from its supposed tendency to the production of ascites. By some it is alleged, to be almost a constant concomitant on that variety of dropsy, and others, on apparently more accurate data, have computed it as being present in about one-third of the cases. Laennec, who was the first to notice it distinctly, called it *cirrhosis*, from the yellowness of the liver, by which title it continues to be designated. Examples of ulceration, even cancerous, occur, and in one instance at least, the whole of the parenchyma was removed by its ravages, leaving only the vessels, resembling a corroded preparation of the organ, as in the case of the celebrated Sir William Jones, who died in Bengal. An occasional event, is that of an extraordinary growth of the liver, without any material change in its structure, constituting a mere hypertrophy. The most remarkable instance, perhaps, of this kind on record, is one where the liver weighed forty pounds. But with enormous developments, it is generally diseased. We are told by Johnson, that he has seen it "of all sizes, and extending from the margin of the ribs, to various depths of the abdomen as far down as the pubes." Gooch gives a case

where it weighed twenty-eight pounds—Baldinger another of twenty pounds—Bonet a third of eighteen pounds—and Mr. Abernethy one, which filled the whole cavity of the abdomen, without, however, his stating its weight. In several instances, I have seen it myself, of a very great size, though always much disorganized.

Not long since, I examined a case, where it occupied more than half of the abdomen, and weighed between fifteen and sixteen pounds. Considerable portions of it were scirrhusified—tubercles abounded—the gall-bladder was greatly distended, and contained sixty-eight very large encysted calculi. Eight inches of the colon firmly adhered to it, and so embedded and incorporated with its substance, that it were difficult to have separated it even by dissection. The stomach, preternaturally small though apparently sound, was thrown out of its proper location, and laid vertically, in the left hypochondriac, concealing a very diminutive spleen—considerable scirrhusity of the pancreas existed, while the residue of the abdominal contents seemed only to be anormal by a reduction of dimensions.

An overgrowth of the liver to nearly an equal extent, as in the foregoing case, terminated the existence of the late Chief Justice Marshall. By the magnitude to which this viscus had attained,—I found the stomach, dislocated from its natural position, was forced into a perpendicular direction, its sides pressed into contact by the liver, so as to obliterate its cavity, and he being unable to retain nourishment, for it was rejected as soon as swallowed, finally sank from inanition, after a lengthened continuance of unmitigated sufferings. Thus perished this truly great and good man, leaving a void in a sphere of usefulness, which, in the eloquent language applied to another illustrious personage, no one could be found to fill, or who had even a tendency to fill, and bequeathing to his country a name, that makes it advantageously known in every enlightened portion of the world.

“Clarum et venerabile nomen
Gentibus, et multum nostræ quod proderat urbi.”

Besides these lesions, however, proper to the organ itself, there is also, frequently to be observed great disorder in more or less of the abdominal viscera, the solid as well as the hollow and membranous, the alimentary tube, the peritoneum, omentum, &c.

Nor is it uncommon to meet with the thoracic contents, the lungs, and the heart deeply affected, and to which may be added, the brain. But how far these latter are primary or secondary, the cause or effect, is not always easily decided. We know, that lesions of these organs, are capable of a reciprocity of production.

Not much need be said of the pathology of this series of hepatic affections. Many instances resulting from the imperfect cures of acute hepatitis, may with propriety be considered as a more advanced stage of the same disease.

Commencing idiopathetically, the case assumes the modification produced by a slower and more feeble progression of a similar morbid process. There is an identity, or nearly so, in the kind of action, though varied in the degree of activity and intensity. But while some of the pathological phenomena are to be deemed the ordinary results of inflammation, those of the more irregular deviations, consisting in new formations of structure, must be referred to vitiations in the nutritive functions.

It is by such interstitial depositions of scirrhus, steatomatous, tubercular, or other matter, that the character of the liver, or any other organ is altered, and being heaped on in excess, and without the plastic hand of nature to model it, exchanges its definite configurations, and dimensions, for the rude, enormous and anomalous shapes, which these masses occasionally present.

Tracing the progress of this collection of anormal processes, it seems probable, that the first step, in most instances, is an undue afflux of blood to the liver, productive of congestion, which, disturbing its economy, leads on to those further changes by which nutrition becomes irregular and depraved, each being a link of a consecutive chain. That the liver receives blood, under such circumstances, at the expense of the other abdominal contents, is presumable, from its undue growth, and by the diminished size of the organs with which it has the most immediate vascular connections.

As far as I know, this fact which, of late, has attracted some attention, was first promulgated by myself. Many years ago I suspected it, and all my subsequent inquiries in reference to it, have lent to its confirmation. The converse I have reason to believe to be equally true, or when there is a wasting of the liver, and of an indurated texture, the spleen especially, is in the same proportion, increased in bulk and disorganized. As an increase

of growth in the liver depends on hypernutrition, so is the reverse state, or atrophy of it, owing to a diminution of supply, it being cut off, or impaired, in various modes not required to be detailed.

From the difficulty of determining the precise condition of the organ, our practice is marked by no nicety of distinction, or exactness of remedial application in these affections.

An examination, as we have seen, may in some instances satisfy us of its enlargement. But whether this be owing to chronic phlogosis simply, or any of the more formidable changes of structure, which have been noticed, no human perspicacity can positively divine.

Nor must we forget, that the liver may be most seriously affected without any augmentation of growth. Confiding in symptoms, or indeed any other signs, we shall generally be not a little perplexed, and very often egregiously deceived. Not a little, I am aware, has recently been claimed for the powers of percussion and auscultation, in this respect. But whatever may be the merits in some other applications of them, I am quite sure, that with a view to the discrimination of the particular lesion of the liver, they must prove utterly nugatory.

Believing however, that the case consists in no material structural lesion, that it is of comparatively recent date, and is caused merely by chronic phlogosis, or incipient induration, and these perhaps are the only curable states, the treatment best calculated to afford relief, is made up of moderate and repeated venesection, of the use of cups, or leeches, to be followed by a succession of blisters, or a caustic issue, over the region of the liver, aided by occasional purgings. An impression thus kept up on the intestines, does much to restore the functions of the liver. Calomel should be freely given, with this view, every two or three nights, to be worked off in the morning with castor oil or Epsom salts, or magnesia, alone or united—and, perhaps, something is gained by the addition of the tincture of colchicum to the latter combination.

Among the secondary measures, various other deobstruents have been proposed, the gum ammoniacum, the taraxacum, &c. The former of these was much confided in by the late Professor Wistar, and several of the German authorities, whether on sufficient evidence of its utility, my own experience does not enable me to say. But in regard to the latter, I have much reason to

suppose that it sometimes proves serviceable. It is particularly praised by Boerhaave, Bergius, Zimmerman, and other writers of the continent of Europe, and also by Pemberton of England, in his work on the diseases of the viscera. The extract, or juice of the fresh leaves, is usually directed. Confirmatory in a degree, perhaps, of the efficacy of the latter, I have to state a fact which I learnt from a very intelligent grazier, that cattle penned during the winter, becoming what is called *liver-grown*, are very soon relieved by being turned into fields in the spring, abounding with dandelion. Yet against its conclusiveness, it may be alleged that while thus feeding on this article, cattle are released from a state of confinement long endured, to that of freedom of exercise, with an exchange of dry provender for an indiscriminate indulgence in a variety of green vegetable matter, each of which circumstances, is well known, to be conducive to the removal of visceral obstructions. The annexed I have found an excellent prescription, in the dose of an ounce, or more, several times a day.*

Means of this sort failing, we are next to resort to a course of mercury. But here a salivation, particularly a deep one, is in all cases to be avoided. The object is to bring back the organ to its natural state, to be effected by an alterative operation. Minute doses of calomel, or the blue pill, with opium, are to be insinuated till the system is perceived to be under its impression, denoted chiefly by an improvement in the secretions, and which is to be maintained, without abatement, for several weeks, and in the more inveterate cases, with occasional intermissions, for months.

In the use of mercury, however, some discrimination is demanded. Its salutary effects, under all circumstances, may be mainly ascribed to the promotion of the biliary, and other secretions, and failing to do this, it proves inert and nugatory, or causes a pernicious state of irritation, or positive phlogosis, with an irregular febrile movement. In the management of the chronic affections of the liver of every description, these are considerations which should invariably control its employment—continuing or discarding it, according to the mode in which it affects the system. Not a few instances I have seen of hepatitis as well as of jaundice, in which the condition was most unequivocally dete-

* R.—Infus. Tarax. ℥iv; Extr. Tarax. ℥ij; Carb. Sodæ ℥ss; Tart. Potass, Tinct. Rhei aa ℥ij.—M.

riorated by neglect of these practical maxims, and some, where irreparable mischief was entailed by a lengthened persistence in a mistaken course.

Disappointed with the internal use of mercury, or the bowels being too irritable to retain it, inunctions may be employed. Nitro-muriatic acid externally, as well as internally, is substituted for mercury, where the latter has proved ineffectual, or, for any reason, is deemed inadmissible.

It may be added, that, internally, some of the preparations of iodine, and still more frictions with the ointment over the right side, have been used, and that we are not without proof of their success. Yet I have seen nothing myself to inspire any very great confidence in their efficacy. To assuage pain, or to procure rest, or to remove undue irritation, opiates on the whole are to be preferred, though the cicuta, henbane, belladonna, stramonium, &c. may be tried.

That, in these cases, reliance is placed mainly on mercury must be apparent, and in recommending it, having previously mentioned it as one of the causes of the disease, it may seem that I am guilty of an inconsistency. But such an imputation is not just, and cannot be sustained. It is against the abuse of the article I protest: and do not instances occasionally present, where the same agent is the cause and remedy of the disease? This indeed is so true that we have the old aphorism, "*similia similibus curentur.*" Take for illustrations of it, delirium tremens, the atonic states of the stomach from intemperance, &c. Do we not frequently resort to that very stimulant as a cure, which, improperly used, had produced the condition we are endeavouring to redress? Like the fabulous sword, the rust on which healed the wound inflicted by its point, mercury here cures the mischief it had occasioned. Even admitting that the case of hepatitis, we are called to treat, could be indisputably traced to the undue employment of that article, it would still be the appropriate means of relief. The liver being torpid, we should recur to mercury, from its well known specific powers of exciting and restoring its healthy functions.

It will not, I trust, be supposed, from what I have said, that I mean to lend any support to homœopathy, the leading feature in the doctrine of which is, that remedies are curative in proportion as they operate like the cause of the disease. The principle, as I

have shown, is undoubtedly true to a certain extent. But what is to be received with many qualifications, they make of universal application, or without any limitation at all. False in theory its disciples are still more so in practice, from the entire impotency of the means they profess to employ. Exceedingly absurd, and mischievous as are many of the notions which disfigure the early annals of our science more especially, none equal in these respects this recent phantasm, or had for its votaries such a collection of audacious charlatans, or unmitigated impostors, and who unrestrained by law or conscience, are spreading death in every direction.

Nor longer ought it to be concealed that these mercenary miscreants perceiving a loss of public confidence in the utter inertness of the original practice, and particularly in the avowed infinitesimal doses of medicines, are whirling around into the opposite extreme,—now resorting to the most active, and in exorbitant quantities. The articles to which they are at present devoted, arsenic, veratria and aconite, are the most deleterious when incautiously directed, of the whole *materia medica*. But “fools rush in where angels fear to tread.”

From too feeble or energetic practice, I have seen among other instances of disastrous results, very lately two individuals absolutely poisoned by the inordinate use of aconite, the one thrown into violent tetanoid spasms,—the other with incessant vomitings, and delirious wanderings, and both cold, damp, and nearly pulseless. In a few words has been given my opinion of homœopathy and its followers, neither of which, can a wise or good man, and especially a physician, countenance in any way or degree for a moment. To consult with such arrant quacks is a degradation, to encourage them is to become *particeps criminis*, and to employ them, is wantonly to hazard life.

An exception may be found to the use of mercury in the atrophic state of the liver connected, as formerly described, with a defect in the process of hematosi. It is here the most pernicious of medicines, and, in place of it, the martial preparations, the phosphate of iron *par excellence*, with a well regulated animal diet, and exercise substituted.

CONGESTION OF THE LIVER.

From the peculiar character of the circulation of the liver, which is more venous than arterial, we might presume its liability to this pathological condition, independently of the direct evidence of the fact. Its acute affections, indeed, of which I have already treated, participate of this character, and especially in the early stage. These, however, are the active form of it, which are soon supplanted by inflammation, or, if any of it remains, it is in so subordinate a degree as to lose all prominence, and may be completely masked or concealed. Engorgement simple, or unmixed with any other lesion, is the state to which I have now reference. This occurs under very different circumstances, exists in diverse proportions, either partially or to a great extent, and varies in its nature, it being passive.

An attack, for the most part, is very sudden, or with little or no premonition. Extreme languor, however, may be previously complained of, soon followed by chilliness, with some degree of collapse—while, in other instances, these precursory symptoms are altogether absent. But, whichever may be the mode of aggression, a developed case of violence is characterized by sensations of fulness of the liver, sometimes amounting to an uncomfortable ache, or even positive pain, attended by an evident distension of the region of that viscus, and tenderness on pressure—by short, panting, and laborious respiration, by nausea, and sometimes vomiting and cramps of the stomach or bowels, and by a weak and emptied or a full, struggling, interrupted pulse, without any febrile reaction, and occasionally by hæmorrhage. But, on the contrary, where the attack is lenient, or more gradually comes on, most of these symptoms at first are wanting, and the affection has actually endured for a considerable period, with scarcely any inconvenience, or other evidence of its existence, save that derived from an inspection of the right hypochondrium.

This affection is often one of the introductory symptoms of the cold stage of malignant autumnal fevers, especially intermittents of this nature—and I once met with it proceeding from the immediate influence of an exposure to the low temperature of an ice house—and, in another instance, from a copious draught of

intensely cold water, when the system was heated and fatigued. Examples are also reported of its being brought on by impediments to the circulation in the right side of the heart, leading to an accumulation of blood in the liver, and we are told by Andral that it may be occasioned in the foetus, by some mechanical cause, during parturition. But, though sometimes it is thus induced, the case which I have more immediately in view is generally assignable to extreme heat, separately or combined with miasmata, of the effects of which, there is abundant proof afforded in our hot, low, marshy districts of country, and still more conspicuously in similar regions of India, and other portions of the world.

From hepatitis this condition, when well marked, may be distinguished by the suddenness of the invasion, the exemption from fever, the peculiarity of the circulation, the obtuseness of the pain, the comparatively slight sensibility to local pressure, and the aspect of collapse and exhaustion.

Engorgements of the liver, heavily oppressive, are always alarming, and especially as they are passive, or occur in the feeble, or during an epidemic prevalence of fevers. Differently circumstanced, they prove of far easier management, and are often speedily relieved.

Dissection reveals appearances according to the gradations of the affection. It having been vehement and extensive, we find the liver swollen into large dimensions, with little change of consistence, and of a reddish purple, or of a dull brick hue. Dark blood, on an incision into it, flows out very freely, and the interior structure is very much of the colour of the external surface. Both the large and the small vessels are prodigiously injected, the blood still retained in them, though sometimes there are extravasations of it in clots, and in other instances, infiltration of it through the parenchymatous texture, constituting an *hepatic apoplexy*. These effusions, as well as the more copious hæmorrhage, which may occur, seem to be owing chiefly, to an exhalation from the minute extremities, and not to a rupture of any great vessel—such an event having been very seldom observed. The lesions, however, which I have described, may be more partial, or limited only to portions of the liver, the residue of the organ exhibiting little, or very slight aberrations from its natural aspect and condition.

Contemplating the phenomena of this case, in its ordinary ex-

hibition, it clearly appears to consist in passive, or very atonic congestion, from a loss of that power in the vessels by which the circulating movements are maintained. The same view is held by Andral, who goes even farther, and declares, that in the worst form of it, at least, "the blood collects in the liver exactly as it does in the gums in scurvy." Nevertheless, it is very conceivable, though I confess, I have never witnessed such an instance, that the affection may present much greater activity than has been represented. Yet it is probable, that any high degree of such a state, could not long be continued, from its tendency to bring on inflammation, by which conversion, we should have hepatitis.

Whatever notion may be entertained of its pathology, the great aim in the treatment of the affection, must be to remove the concentration of blood, and with integrity of constitution, this is undoubtedly best effected by copious venesection. But if it be not admissible to such extent, or tried without success, then to resort to cups over the affected part. Great advantage is derived from emetics, owing doubtless to their power to emulge, or unload oppressed organs, and to re-establish an equable circulation. Nor is purging with calomel, on the same principle, of scarcely less efficacy. Blisters are also useful. It will, indeed, be often found the best practice in the weaker congestions, and especially when the vital forces are very languidly exercised, that while depleting, to employ stimulants the most diffusive and energetic. But to discuss this point as it deserves, would require a wider range than I can now appropriate to it.

That such hepatic congestions, as I have had in view, ever become chronic, does not very clearly appear, unless the state which I am next to notice, may be so deemed. My allusion is, to what has hitherto been called:

HEPATICULA.

This term is a diminutive of hepatitis, and was adopted to express the smallest degree of the chronic state of the latter disease. It may, perhaps, in this sense, be sometimes properly applied, though I am inclined to believe that the affection to which

it is appropriated is, for the most part, independent of inflammation.

The pathological condition, considered as hepaticula, is characterized by a sallow complexion, more of a lemon than orange tinge, or sometimes by a dingy white—by much laxity of the integuments, with the aspect of bloatedness, particularly of the abdomen, which is exceedingly tumid—occasionally œdema of the lower limbs—dry, husky, unperspirable skin—shortness of breath on the slightest exertion—by anorexia, and imperfect digestion,—foul tongue—costive bowels—clay, ash, or slate coloured stools—deficient, dark or loaded urine—sluggishness of body—hebetude of mind—pevishness of temper, and dejection of spirits. The pulse is mostly little affected, sometimes, however, feeble—while, in other instances, it is full, slow, and may be intermittent, or otherwise irregular. No acuteness of pain is felt in the region of the liver, or tenderness betrayed on pressure, the complaint being rather of a disagreeable ache, or a severe sense of distension. This state of things may continue for a long period without much alteration, prone, as it generally is, to further degenerations. Commonly these are a wasting, slow, irritative fever, heightened by an exacerbation at night, subsiding with copious perspiration, ultimately followed by colliquative diarrhœa, or it more speedily eventuates in hæmorrhage of dark blood or general dropsy, or the whole united, or some other fatal disorder. It is familiarly called throughout our Southern States, where it abounds, INWARD FEVER!

Examples of this affection, are to be met with among persons of all ages, though more so in children, habituated to the influence of miasmata. Being partially acclimated, as it were, this cause of fever, and of the more special disturbances of the liver in such positions, operates with comparative lightness, and hence the only sensible effect is to swell and derange that organ. But it is also consequent sometimes on ill-cured intermittent and other fall fevers.

To discriminate between this affection and chronic hepatitis, may be embarrassing on some occasions. Much, however, is to be learnt, with this view, at all times, from the general physiognomy—and the usual absence of acute pain, and the other incidents of positive inflammation, are very decisive.

Commonly, in the beginning, or at an early stage, the affection

is easily removed, and reversely when it becomes inveterately fixed by neglect or improper management—changes having then taken place on which salutary impressions are rarely made.

Of the anatomical characters, I am not very accurately informed. But in the few dissections I have seen, the liver was found mostly enlarged, sometimes enormously, with a firmer texture than natural, though I have observed it softer, and retaining pretty nearly its ordinary colour—the external surface, being seemingly little affected, whether of the serous covering, or of the organ itself. Cutting into it, dark blood issues forth very copiously. Few traces of unequivocal phlogosis have I detected. Differing from all this, the liver is occasionally found of reduced dimensions, even actually atrophied, of a pallid hue, and of a condensed consistence, with defective vascularity. No doubt other, and perhaps more important alterations take place, and, indeed, may have been reported, of which, however, I have no knowledge.

From this account it is, I think, to be inferred, that the real pathological condition of the case is, that of venous engorgement of the liver, induced by torpor of the portal circulation, from the constant exposure to the operation of miasmatic influence. But such a condition cannot long endure without a tendency to further lesions—and it is reasonable to presume that these, in some instances, do occur, even inflammation and its consequences. An impression widely prevails, as well professional as popular, that in this and its allied affections, there is an excess of bile, and to which all the principal sufferings are ascribed. The patient indeed, complains of scarcely any thing else, and believes if he could get rid of it, he should be well. Directly the reverse is true, or that in the whole of the chronic disorders of the liver there is a great deficiency of biliary secretion, and the little which may be formed, is so vitiated as no longer to serve any useful purpose in the animal economy. Each of these states being characterized by pretty much the same symptoms,—the loss of appetite, nausea, depraved digestion,—headache, nervous wretchedness, &c. has led to the delusion.

In the management of these cases, we must be governed essentially by the state of the system. The loss of blood, generally or locally, will be demanded where there is an increase of vascular action, or any considerable fulness in the affected part, to be followed by counter-irritation. But, this exasperated condition not

existing, we may at once commence the use of purges. Combinations of calomel and aloes, with the compound extract of colocynth, are well suited for this purpose, and an application of leeches around the anus will be found very advantageously to co-operate in the design of diverting the circulation from the liver to the rectum. An alterative course of the blue pill may next be tried, and also the nitro-muriatic acid. The vapour bath is, moreover, very useful. Cases I have repeatedly seen benefitted by it, and some where cures were promptly and completely accomplished.

In the leucophlegmatic variety of this affection, usually associated with an atrophied liver, or indeed under any circumstances, of much debility, the best remedies are the martial preparations, especially the phosphate of iron, aided by a nourishing diet, exercise by swinging, or on horseback, or a long journey if practicable. But, above all, should the individual live in a miasmatic district, let him escape from it, by which alone cures are often effected—and this is an additional reason with me for supposing that no essential disorganization exists in the case.

It remains to remark, that in many instances of protracted hepatic disturbance, whether inflammatory or otherwise, after our best exertions have proved abortive, relief is afforded by resorting to our mineral, particularly the Sulphur springs, the best of which are those of Virginia. Eminently, however, as these are entitled to commendation, I am persuaded that not less may be derived from the thermal baths of the Warm and Hot springs of the same neighbourhood, each being adapted to meet different indications, and should, perhaps, be brought to co-operate in the treatment of most cases of chronic hepatic disease.

ICTERUS, OR JAUNDICE.

THE technical title of this disease is said to come from the Greek *Ικτερος*, the golden thrush, the colour of the skin in it being thought to resemble the plumage of that bird. But the elder Pliny, having said, that if the patient looks at the thrush, he is immediately relieved, and the bird dies,—it has been conjectured that in connection with this superstitious notion the title may have originated. By the Romans the disease was also denominated, *Morbus Regius*, because according to Celsus, its cure is to be attempted by every kind of royal diversion, “*Lusu, joco, ludis, lascivia, per quæ mens exhilaretur: obquæ regius morbus dictus videtur.*” The same idea is expressed by one of the Latin poets:

“*Regius est vero signatus nomine morbus
Molliter hic quoniam celsa curiatur in aula.*”

But Pliny informs us that the disease was so called since those who frequent the courts of kings are most liable to it, which is probable from the voluptuous habits of such society.

Further synonyms, we have in *Aurigo* or *Aurugo*, and *Arquatus*, the former two evidently derived from *Aurum*, gold, and the latter, from the analogy of the tints of the disease to those of the rainbow, *Arquatus*, arched, being applied to that phenomenon. The common or vernacular term *Jaundice* is supposed to be a corruption of the French word *Jaunisse*, meaning yellowness. *Cachexia Ictericæ*, as it is termed by Hoffman, I think, more clearly expresses the pathological condition, than any other designation which it has received.

The disease may be acute or chronic, attacking as suddenly as the electric shock, or approach in the shape of repeated cramps, apparently of the stomach or upper intestines, probably the duo-

denum, or creep on gradually, with little appreciable local or constitutional disorder. Many instances seem to be merely incidental to the congestive or inflammatory affections of the chylipoietic viscera, febrile or otherwise, and still oftener, to a general chronic pravity of system, and is correspondently characterized.

As usually happens, however, in its more genuine form, it is introduced by an indescribable wretchedness of feeling, with languor, inactivity, and depression of spirits, headache, anorexia, thirst, and unpleasant taste,—though the tongue is little or not at all changed,—præcordial uneasiness, tension of the epigastrium, considerable distress of stomach, manifested by flatulence and sour eructations, or nausea or vomiting—or there is constipation, with sometimes cholick-like pains, or dry and itchy skin, restlessness or disturbed sleep, alternations of chilliness and flushes, followed by very slight or no fever, or indeed any material disturbance of the circulation. Yet in the latter particular, I have seen the reverse, the pulse, being slow, hobbling, and even intermittent. These affections in various degrees, and combinations, so frequently prove the precursors of the disease, if by it be meant the peculiar sallowness of hue, its most prominent external feature, that its forthcoming may, with some certainty be predicted.

The colouration first appears in the eyes, cheeks, neck and chest, from which points, it may be progressively spread over the whole superficies of the body. But it is not uniformly so diffused,—having seen it myself restricted to the eyes, and very often embracing only the face. As an anomaly, it is occasionally confined to a longitudinal section of the body. Behrens records a case superinduced on hemiplegia, where the palsied side was so exclusively icterose, that only one half of the nose was tinged. Examples nearly similar, are to be met with in the writings of Valsalva, Etmuller, Dupui, &c. Commonly it is of some modification of yellow, from a pale lemon to the deepest orange or saffron hue. Cases, however, are now and then presented, in which it is green or of a darker or lurid shade, called green or black jaundice, the latter technically, *melas icterus*.

Not much is to be met with in the treatises on the disease, relating to this variety,—and indeed, the only precise account of it which I have seen, is in a short essay by the late Sir Matthew Baillic, so eminently distinguished by the accuracy of his observations. The substance of what he has communicated on the

subject, I shall notice, under the several heads of my inquiry. Excepting the difference in the colour of the skin, the symptoms do not essentially vary from those I have detailed. It is said to occur more frequently in the middle and advanced periods of life, than at an earlier age, and oftener in men than in women. The progress of the case is also slower, continuing a year or two, or in some instances for many years, and though exempt from violent affections, it steadily pursues its course, till the powers of the constitution are exhausted.

Three colours have existed in different parts of the same person. Lanzoni had a patient whose face was green to the throat, while the right side of the body was black, and the left yellow. The green and black gradually became yellow, the black again recurred, and finally the whole was yellow.

As the disease advances in its several modifications, the bowels become more obstinately costive, the stools hard, and of an ashy, clay, or white complexion, indicative of an absence of bile. Yet, in some instances there is a profusion of biliary secretion, with laxative evacuations. The urine is scanty, and of a deep yellow, saffron or brown colour, staining linen dipt into it. Tenderness of the epigastrium, and right hypochondrium is often increased, and fever, more or less intense, may ensue, the pulse being full and strong, and sometimes exceedingly irregular, amounting to intermittence. Numerous are the cases however, in which there is scarcely any febrile movement or disorder of the circulation at any period. The head is not unfrequently affected by aggravated pain or fulness, and the disorder of vision incident to the disease is proverbial. My allusion is more particularly to all objects being seen of a lurid or yellowish hue, and which was early observed, as appears from the following lines of Lucretius.

“Lurida præterea fiunt, quæquomque tuentur
Arquatis;—quia luroris de corpore eorum
Semina multa fluunt, simulacris obvia rerum,
Multaque sunt oculis in eorum denique mixta,
Quæ contage sua palloribus omnia pingunt.”

And Shakspeare, no less the poet of nature, declared :

—— “To the jaundiced eye
All things seem yellow.”

Nor is medical authority wanting to the same effect, as that of

Galen, Sydenham, Boerhaave, Van Swieten, Hoffman, &c., who assert that, they have occasionally noticed it. But long and generally as the notion has been entertained, it is doubted by some whether there be any foundation for it, and certainly it is by no means a common event. The fact, was I believe, first denied by Mercurialis, afterwards by Haller,—and by Heberden we are told that of all his icteric patients, he had two only who confessed its existence, and their testimony he distrusted.

Frank, who probably saw more of the disease than any one else, declares, out of several thousand instances of it, there were only five in which the affection existed. My own experience is decidedly against it. Whenever it takes place the humours of the eye must be tinged, and such is a very rare event. But in other respects I have seen the vision much affected by dimness, or becoming double, or inverted.

Cramps of various intensity, attended by vomiting, so continued that nothing can be retained, are sometimes experienced. The pain is mostly circumscribed to the lower part of the stomach or duodenum, shooting through the back,—though such may be its severity that there is an inability to lie down, and the sufferer in a sitting posture, is actually drawn double. Relief being ultimately afforded, it is, as usually believed, by the escape of a calculus from the hepatic ducts. Granting that this explanation is applicable to some cases with such symptoms, it surely cannot be universally received,—having known myself several instances in which the pain was removed by remedies which could have had no tendency to promote the expulsion of a calculus, and under circumstances precluding absolutely the suspicion of its existence. Most probably here, it was induced by spasm of the duct, or of the stomach or duodenum, independently of any calculous irritation. Coe, Heberden, and other writers, however, deny that icterus ever arises from spasm.

What I have hitherto said relates to the more violent and inveterate states of the disease. Every practitioner however, of experience has seen it, and with the deepest tinge of the skin without any constitutional disturbance—the appetite,—the tongue,—the pulse,—the secretory and other discharges, continuing healthy,—and so little is the individual affected, that he goes about pursuing his ordinary occupations with no detriment or inconvenience.

It is hence to be inferred that, the career of the disease is very

different, sometimes speedily submitting to slight remedies, or the spontaneous efforts of nature, or proving very indomitable, running on for an indefinite time,—ending in profuse hæmorrhage, or hydropic effusion, or extreme emaciation, with hectic fever, or some cerebral affection, coma, apoplexy, palsy, or convulsions.

No age, sex, or condition entirely escapes jaundice. It belongs to infancy, and every subsequent stage of existence, though mostly to be met with in somewhat advanced life, and more, perhaps, in males than females. Yet the difference in the latter respect seems not so great as generally supposed. “Men and women,” says Heberden, “are equally prone to this malady,—in a continued succession of a hundred patients, I counted fifty-five males, and forty-eight females.”

Those most subject to it undoubtedly, are the sedentary, the indolent and the studious,—or whose occupations require a curvature of the body,—and the dissolute, particularly the intemperate and debauched. The hysterical and hypochondriac, are also disposed to it, and all such as are harassed by the cares, disappointments or vexations of life.

Criminals are said by Haller, to be very liable to it, whether from confinement, or mental inquietude, does not clearly appear.

The disease has hitherto been chiefly ascribed to the entrance of bile into the circulation, owing to an obstruction of the ducts of the liver by inspissated bile, or calculi, or heavy hepatic congestions, or spasmodic stricture, or thickening of the lining tissue of the tubes, or pressure on them, by infarctions of the duodenum, from lodgments of ingesta or other matters, or of enlarged pancreas or other viscera, or diverse adventitious tumours.

Most or all of these causes may operate in this way. But there are some others of an analogous nature, by which the disease is induced, not referable to such a mode of action. It often proceeds from constipation of the lower bowels, in women especially, who are more liable to large accumulations of fæces in the colon and rectum, and also from the gravid uterus, or enlargements otherwise of the organ, as well from tumours situated low down in the abdomen.

Torpor or paralysis of the ducts, has also been alleged to be a cause, as well as the choking up of the choledochus by worms. Examples are recorded by Beatty, Lieutaud, and Ludwig of lumbrici being either in the ducts or gall-bladder of icteric patients,

and there is a preparation of the liver in the museum of this University* illustrative of the same fact, taken from an individual who sank under protracted sufferings, from hepatitis with jaundice.

But whatever may be the influence of these causes, the disease surely is very often brought on by other circumstances. Certain poisons will induce it according to Galen, who saw "a green colour to take place all over the body of one of the Emperor's slaves, from the bite of a viper,"—which has been subsequently confirmed as to the influence of the virus of that reptile, by Fontana,—and, I have understood, the icterose aspect is a very common effect of the bite of a rattle-snake, and some other venomous serpents of this country. Lanzoni tells us that "he observed an icterus occasioned by the bite of a cat which lasted forty days," and Van Swieten another, by that of a dog. Topical yellowness is a pretty uniform result of the sting of the bee, wasp, hornet, &c. Two instances of poisoning by arsenic came under my notice, in which the skin, as well as the serous exhalations, in the cavities of the body, were deeply tinged.

From mercury inordinately used, there is reason to suppose, that the disease is sometimes occasioned. Many years ago, I saw it developed during a protracted salivation for syphilis, and afterwards, a second case of it under the same circumstances. But supposing these were coincidences, rather than effects, they attracted little attention at the time. Greater importance, however, do I now attach to them in this view, from having subsequently met with similar instances reported by a distinguished writer. Cheyne, to whom I allude, states, "that it does not appear to be generally known, that mercurials actually produce jaundice, though it is a fact, of which, I have within the last few years seen three striking examples." Colles has given a similar fact. The history of these cases is precisely analogous to that of those which occurred to myself. They also lend confirmation to my hypothesis as to hepatitis, being induced sometimes in the same way.

Certain alimentary ingesta will cause jaundice. Twice I have known it excited after a few hours, by an oppressive supper, creative of much nausea and vomiting without, however, cramps

* University of Pennsylvania.

or spasmodic pain or uneasiness. The late Professor Physick assured me that he had seen similar occurrences. Drinking cold water when the individuals were heated has occasionally induced it in this city. Concussion from the explosion of a bomb in a room, I have learnt from an authentic source, once occasioned it in a moment.

Long has it been known to follow certain physical injuries of the brain, and we have abundant evidence of its proceeding from mental emotions. Either vehement rage or terror has excited it, and it has resulted from petulance, grief, anxiety, and other irritating or depressing moral influences, conformably to the experience of Morgagni, Valsalva, Behrens, Tode, Monro, Drummond, &c. Excessive grief, from the loss of children, caused it in two ladies whom I attended. We are told indeed, by Hoffman, that he knew a woman to be affected by the disease, whenever her mind was agitated, and Cooke in a work on the derangements of the digestive organs, mentions a physician who as uniformly became icterose if annoyed by a dangerous and perplexing case of disease. Not the least remarkable instance, is that of the celebrated Murat, King of Naples, who on learning, which was not true, that his queen during his absence in the memorable Russian invasion by Napoleon had assumed his throne, became violently agitated by rage, and was instantly jaundiced.

Nothing escaped the comprehensive observation of Shakspeare. The following is the reply of the gay Gratiano, to the gloomy moralizings of Antonio in the play of the Merchant of Venice:

“Let me play the fool:
With mirth and laughter let old wrinkles come;
And let *my liver* rather heat with wine,
Than my heart cool with mortifying groans.
Why should a man, whose blood is warm within,
Sit like his grandsire cut in alabaster?
Sleeps when he wakes? and creeps into the *jaundice*
By being *peevish*?”

In the tent scene of Troilus and Cressida, Agamemnon is thus made to address his council of lieutenants, who had become despondent at the siege of Troy.

—Princes,
What *grief* hath set the *jaundice* on your cheeks!

The ample proposition, that hope makes
 In all designs begun on earth below,
 Fails in the promised largeness: checks and disasters
 Grow in the veins of actions highest rear'd:
 As knots by the conflux of meeting sap,
 Infect the sound pine, and divert his grain
 Tortive and errant from his course of growth."

Generally of sporadic existence, the disease, however, prevails epidemically, and to considerable extent, the most remarkable instances of which, are those noticed by the elder Frank, of Vienna,—the one at Ghent, in 1744, and the other at Mayence, in 1754. As related by Stokes, a low fever prevailed in Ireland, in which the yellowishness, and many other phenomena of jaundice, were strikingly presented. But this is so common to such fevers, that a variety of them is called *Typhus Icterodes*.

No doubt, at certain periods, there is an extraordinary disposition to the disease, a much larger number of cases of it occurring than usual,—though rarely so widely spread as to constitute an epidemic. I have witnessed it here, on several occasions, in this limited or partial character. But with us, it is far more pervading among horned cattle, and which are very liable to it, sometimes, too, proving exceedingly fatal. As I formerly mentioned, it is denominated by the country people, the *yellow water*, from the colour of the urine.

The phenomena of Jaundice are so peculiar, that it can hardly be mistaken for any other disease. Heberden states, "that the most distinguishing signs are a yellowness of the eyes, skin, and urine, and a want of this colour in the stools,"—which symptoms are selected by Cullen in his definition of it.

Far more difficult is it, and at the same time very important to distinguish the several forms or varieties of the disease, as proceeding from its causes and locations. But though this has been elaborately attempted by some writers, the embarrassment remains. Cases strongly marked may be discriminated by skilful investigation. But many are so obscure as to defy all our powers of distinct recognition,—and for the most part, we are compelled to prescribe for the general condition of the system, that of excitement or the reverse, without regard to more precise knowledge.

Most cases of a recent and functional nature are medicable, and especially so as respects those of infancy. Being, however,

of long standing, and complicated with disorganizations of the liver or other important structures, or in the old or infirm in any respect, they usually prove incurable, or of very slow or doubtful amendment.

Contrary to common opinion, it is stated by Heberden, that attacks from gall stones are rarely fatal. That they are however occasionally so, is well determined, and perhaps more frequently than he supposed. There is a case of it reported in the Medical Repository of London, of a woman suddenly dying in great agony, in whom was found a calculus sticking in the gall duct, and the latter ruptured. By Abercrombie another is mentioned, of a fatal issue,—the calculus being impacted in the common duct, the individual having previously suffered from ileus. The calculus sometimes works itself to the exterior surface, and is extracted. Examples of this kind are reported by Morgagni and Haller, and more recently by Gregory and Graham, most of which did well,—and hence it is conjectured that those immense calculi which sometimes pass out of the bowels, instead of escaping through the ductus choledochus, get into some portion of the alimentary tube by a similar process of adhesion and ulceration.

Nor according to Burserius, “is there much reason to apprehend danger when the disease is occasioned by hysteria, hypochondriasis, or pregnancy, as it quickly ceases after delivery,”—in which latter remark, I cannot concur, having witnessed in several instances very opposite results. Baillie declares, that, where the tinge is lurid or green, though the case may be protracted, recoveries seldom take place. Melæna, or the purging or vomiting of dark grumous blood is usually a mortal occurrence, and emaciation with hectic fever, or dropsical effusion, or any heavy cerebral affection as profound coma, apoplexy, palsy, or convulsions, imports either immediate or remote danger.

Favourably may we generally prognosticate where, with improvement in the appearance of the cutaneous surface, there is a subsidence of gastric disorder, more natural fæces, and heavy deposits in the urine. Certain evacuations, in acute attacks, as hæmorrhage from the nose or rectum, or by perspiration, or from the kidneys, or bowels, are reputed to be critical, promptly resolving the disease in some cases.

The autopsic phenomena in jaundice vary much. The liver exhibits great diversity of derangement, though, in some instances

it is slightly or not at all affected. For the most part its acute states are distinguished by the evidence of congestion or inflammation, separately or combined in various proportions, and the chronic, by more or less disorganization of every description. No change of structure, indeed, of which the viscus is susceptible that has not been detected. Baillie affirms that in green or black jaundice "the liver is often enlarged, hard, and tuberculated, throughout its whole substance, though sometimes confined to a single part of it, and occasionally, no induration whatever, is discoverable in that viscus."

Gall stones are sometimes found in its substance, its ducts as well as its bladder, varying as to number, size, and figure. Morgagni refers to cases in which there were several hundreds, and to one, where they amounted to three thousand six hundred and forty-six. Thirty, forty, or fifty, are common, and I formerly related an instance of sixty-eight which I met with. The largest stone on record perhaps, is that mentioned by Abercrombie, measuring in its greatest circumference four inches, and in its smallest three inches and a half. Nearly of equal dimensions is one communicated by Mr. Brayne, in the Transactions of the Medico-Chirurgical Society of London. They are occasionally of some geometrical figure, though I have seen them otherwise, or simple irregular concretions. Whether they are ever found in the substance of the liver has been doubted, at which I am surprised, as Morgagni, as well as others, has reported several examples of such. "Frequently, however," says Burserius, "in icteric bodies, no morbid condition of the liver, no taint of the ductus biliferi, and no biliary calculi are observable." His statement is substantially confirmed by Heberden, and other writers, among whom may be cited as furnishing very conclusive evidence, Corbin, who has recently published the post-mortem appearances in several cases of the disease, in only one of which was there the slightest obstruction of the biliary ducts.

The stomach and duodenum very often betray marks of phlogosis or its consequences, by thickening or other changes of texture. Considering the disease to be exclusively hepatic, these latter appearances did not formerly attract attention. But they have been noticed by several of the late writers. Cheyne has minutely described them, as occurring in several cases which he examined. The most satisfactory account, however, is given by

Andral, who has paid great attention to the subject. As the result of his numerous dissections, he states that the disease may be connected with every variety of hepatic derangement, and also exist without any whatever. The latter happening, either an acute or chronic duodenitis, or an inflammation of the brain, or its membranes will be found, though sometimes no change can be detected in any of the solids. * As regards the cerebral lesions, these have been frequently observed, and of various kinds and degrees.

For the most part, the qualities of the bile, cystic and hepatic, are altered in colour and consistency. To use the language of Good, it has "been met with acid, acrid, saltish, insipid, whitish, black, green, eruginous, and versicoloured—as dense and dark as elderlob, as tenacious and limpid as the white of eggs, and as crowded and granular as the spawn of frogs." Every part of the interior of the body in violent and lingering attacks may be tinged of the same hue as the skin. The brain and spinal marrow, the tissues and substance,—the pericardium—the heart,—the lungs and their membranes,—the abdominal viscera,—the blood-vessels,—the fat,—the cartilages,—the bones,—even the hair, have been observed in this state. Excepting *the milk*, perhaps all the secreted fluids, as the perspiration, the saliva, the sputa, the semen, the serous exhalations into the cavities, &c., are also found discoloured. These statements are made on the authority of Bartholine, Lieutaud, Morgagni, Van Swieten, Storke, Haller, Burserius, Heberden, Powell, and many of the more modern writers. The fact indeed is no longer disputed. Nor is that of the exemption of the milk from contamination. Notwithstanding his extensive experience in the disease, we are told by Frank, that he never met with it, and such is the report of every one who has carefully attended to the subject. The reverse of the allegation of some, that while the meninges are liable to be affected, the brain itself escapes, seems now also, sufficiently established.

The pathology of jaundice is imperfectly understood. That it does not depend on the absorption of cystic bile, as maintained by some writers, is shown by cases reported by Richter and Cholmondy, where it occurred in persons, who after death were found destitute of a gall bladder. An instance is also reported by Sir Everard Home, of a similar kind, without jaundice, or any

serious impediment to health, and Blundell, a teacher of midwifery in London, gives the cases of two children who lived for several months apparently doing well, in whom after death, the biliary ducts were found to terminate in a *cul de sac*, completely preventive of the passage of a drop of bile into the intestines.

Experiments made by Portal in which he tied the common duet of animals with a view of determining the influence of this impediment to the passage of bile in the production of the disease, were without any such effect.

Not disposed, however, to conceal any countervailing fact, I have to state, that some years ago, similar experiments performed by Brodie and subsequently by Tiedemann and Gmelin, though with the different intention of ascertaining the use of the bile, more especially as concerned in the process of chylification, were with somewhat opposite results, or that the eyes and skin became partially discoloured. But these being repeated by Mayo, no such effect, in any one instance was observed, and hence, the point remains undecided, each side being supported by equipollent evidence.

Even, however, were it absolutely demonstrated that jaundice in its most perfect exhibition, uniformly followed the experiment, it would not warrant the conclusion that it is occasioned by the absorption of bile,—since the injuries done to parts by the incisions and ligature might excite the very sort of irritation, which will presently be assigned as the real cause of the disease.

Doubts have long been entertained by me, whether bile had any thing to do in the production of jaundice, and above all, in the mode commonly alleged. Not now to insist on the impossibility of any article entering the circulation unchanged of such an aerid nature as bile often becomes in a diseased condition of the liver, without producing, at once, the most deleterious consequences, it appears to me:

1. That were jaundice owing to this circumstance, the disease might at any time occur, or whenever bile is exposed to the action of the absorbents, as when accumulated in the stomach and intestines, which we know does not. By Powell, an authoritative writer on the subject, we are informed that “the *disease never accompanies those cases of immense secretions of bile*, which are called cholera, at least I have never seen it in very violent ones, nor am I acquainted with any author who mentions it, even

as an accidental symptom, and if it had happened it could not have possibly been overlooked." "Bianchi," continues he, "gives a case where this circumstance was more narrowly investigated, for he examined the absorbents of a man who had died of cholera, and found that their contents were not in the least tinged by bile."

2. That though the stools usually indicate a want of bile, this is not so uniformly. In several cases I have seen it abundant, and Professor Stokes asserts, "that we have jaundice co-existing with even a copious flow of it." "This is strong proof," he says, "in favour of the opinion that some cases of the disease have no connection or dependence on the absorption of bile."

3. That in many instances of the disease, no obstruction was found on a post-mortem examination of the ducts of the liver, or any other hepatic lesion to account for it. The writer just cited remarks, that there are instances in which no mechanical retention of the bile existed,—the biliary ducts and gall bladder, were open, the bile escaped into the intestines, and yet the whole body was jaundiced. These two points are indeed no longer disputed.

4. That the disease comes on too suddenly, as in the instance mentioned by me, of concussion from an explosion of a bomb, or the many related from violent mental perturbations, to suppose it to be occasioned by the gradual absorption of bile.

5. That the peculiar bitter taste of bile is not discoverable in the serum of the blood or other fluids. The contrary I am aware has been asserted, though not with sufficient force to subvert the concurrent testimony opposed to this statement. Many times have I had this matter tested, and never known any individual who detected any bitterness in these fluids. The same was declared by the late Professor Physick, and is averred by the cautious and philosophical Andral in a recent publication, who fully concurs in my views.

6. That in this disease there is comparatively seldom any genuine bile formed. The fluid discoverable on dissection, has scarcely ever such properties as to taste, colour, or consistency. It is a peculiar one, the result of a morbid secretory action, caused by the condition in which the liver exists.

7. Did absorption, moreover, take place, as is contended for, the tinge imparted to the skin, and other parts, should then be of

a colour correspondent to that of the hepatic fluid, and not of the various shades of yellow, which usually happens. But such a process no more goes on in this case, than in retention of urine. The bile must be taken up from the *pori biliarii*, or hepatic or cystic or common duct or gall-bladder, which is in contradiction to all analogy and fact. Does it ever happen in relation to the urine under such circumstances? Granting that a urinous fluid has been discharged from the stomach, and other remote portions of the body, of which, some instances are reported, they supply no evidence of its absorption. These parts had assumed a vicarious office, as we have frequent occasion to witness with regard to menstruation.

Embarrassed by these and other difficulties, some of the advocates of the hypothesis, ascribing jaundice to bile, have so far changed their ground, as to assume the greater probability of its being introduced into the blood either by *regurgitation*, or lacteal absorption. As to the first of these suppositions, its absurdity is so obvious, that it has received very slender support, and in relation to the second, the facts mentioned, strengthened by common experience, refute it. Great reason, indeed, have we to suppose, or rather it may be said, it has been demonstrated, that chyle only is taken up by the lacteals, every other fluid being rejected by them.

Let me repeat that there is no absorption of bile. The secretory function of the liver in jaundice, so far as concerns the normal exercise of it, is perverted or suspended, as in ordinary bilious or malignant fever, and the earliest manifestation of recovery is the restoration of its office.

No longer tenable, these views are now abandoned by the best pathologists, and a very early notion is revived, which alleges, that the phenomenon is caused by the liver being crippled in its structure or functions, the materials of bile pre-existing in the blood, instead of a separation as ordinarily, by that organ, are so deposited, and constitute the disease. Can there be a looser speculation, or a greater absurdity? The rudiments of bile, are not bile itself, which is a peculiar fluid, the product of the secretory office of the liver, and can never exist till the blood is subjected to this process. As well might it be presumed, that in the eunuch, the elements of semen, were in a like manner disposed of, productive of some horrible disease.

Thirty or more years ago, I advanced the suggestion, and which I formerly taught, that the seat of jaundice is in the stomach and upper bowels. This indeed, was merely an extension of my views in relation to hepatitis, and the rest of the graver affections of the liver, all which, I have long endeavoured to inculcate, as originating in gastric irritations, continued to the duodenum, and thence, to the liver directly, or through sympathy. In anticipation of me, I am aware, though not at the time when I adopted the hypothesis, nor indeed, till very recently, it had been conjectured both by Hunter and Bichat, that gastro-duodenitis might probably be the antecedent of the hepatic disturbance, leading to jaundice. Broussais, long afterwards, and certainly subsequent to me, more definitely than heretofore had been done by any one, maintained the dependence of the disease on inflammation of these portions of the digestive tube, and now the doctrine is espoused by many of the very best pathologists.

Commenting on the subject, Johnson says, "that a curious fact has been pretty fairly established, that irritation or inflammation of the mucous membrane of the duodenum will sometimes produce jaundice, when no obstruction can be detected in the biliary ducts:" and more recently, we are told by Professor Stokes, that the disease from this source, is by far the most common. "The pathological expression for it, he remarks, is, that it is inflammation of the upper portion of the digestive tube, or in other words, the result of gastro-duodenitis." But were this true, or such a pathological condition only required for the production of jaundice, would it not be, instead of a rare, almost a daily event? It was this striking fact, that forced me to abandon the doctrine.

Discarding then, these several hypotheses, I am exceedingly embarrassed as to the pathology of the disease. The state, productive of it, is undefined, and I may add, that even its precise location, is not determined. Cases of jaundice occur in connection with every sort of hepatic lesion, and sometimes apparently when there is an entire soundness of the liver. The same holds with regard to the alimentary canal, it being found also deeply affected, or the reverse, perfectly healthy. Mostly, perhaps, the duodenum is concerned, and by inflammation acute or chronic, though the uniform association of this condition with jaundice, cannot be averred. Not unlikely, this mysterious affection is owing to a peculiar irritation of the nervous system, and especially,

in the first place, of the nerves of organic life, with which the lesions of the other organs mentioned have no necessary alliance, however they may occasionally supply or exasperate the irritation. Considering the vast control which the nerves exercise over the whole of the secretory functions in every way,—increasing, diminishing, modifying or suppressing the several products, this view of the origin of jaundice may probably gain some countenance or support. No more surely, is ascribed to the nerves here, than they display in many parallel instances.

Concisely stated, the considerations which led me to this supposition, for I claim for it no higher merit, are the occasional independence of jaundice of all such derangements,—its predisposition in hysteria, hypochondriasis and melancholy,—the suddenness sometimes, of its attacks,—the frequent origination of it, in causes operating directly on the nervous system, as physical injuries of the brain, or moral impressions of various kinds, the early phenomena of cramp, or spasms, and its liability to end in apoplexy, palsy, or some similar cerebral or nervous disturbance.

Looking at the intimacy of the gastro-duodenal relations, as formerly explained, embracing every portion of the system, it becomes very intelligible how such effects should take place. By Andral it is conjectured, in those cases, at least, which proceed from mental emotions, “that the primary impression is referable to the nervous plexus so remarkable for its size, and for its double origin in the nervous centres of animal and organic life which enters into the liver with the vessels, and with them is distributed through the organ.” Be this as it may, from a sympathy with this primary irritation, the capillaries are disordered, and the serum in these vessels consequently undergoes a change as in yellow fever, and in certain instances of poisoning,—tinting to a greater or lesser extent, the various parts of the body. Much the same colouration which occurs in a part from a bruise, happens in all these instances, and as seems likely, is occasioned by an impaired vitality of the extreme vessels. The capillaries being in this enfeebled state, in whatever manner induced, are disposed to effuse a serous fluid of some shade of yellow, or green, or luridness. Besides the hepatic, and gastro-enteric, to which it is most common, we meet with it in the diseases of the spleen.

Two cases of complete jaundice I have seen thus associated, and we learn from Abercrombie, that with a tumid spleen, the

complexion is usually sallow, and general experience confirms it. As true is it of the pancreas, or much testimony to the same effect in regard to it, might be adduced. More than once I have seen jaundice an attendant on gastro-enteric epilepsy, particularly with the lurid hue, and often in chlorotic affections,—the complexion exhibiting all the gradations of the usual colours, as well a waxy whiteness, called *icterus albus*.

Even more commonly is it observable in the cutaneous efflorescences, especially when of a weak or typhoid character. Cases of rubeola, scarlatina, and erysipelas, have repeatedly come under my care, followed by this sallowness. But the most striking proof is offered in some of the early eruptions of infancy. These at first florid, on the weakening of the vessels, gradually assume the sallow hue. The act of death is very often productive of the same effect—it being indeed a very common occurrence, however pallid before, for the corpse to become all over yellow.

My wish on the whole, is, to convey the impression, that though I maintain the initiatory step in jaundice, to be a peculiar state of the nervous system, and to which the characteristic colouration of the disease is owing, I am prepared to admit, as indeed previously intimated, that the remote cause of it may be in many instances, those lesions of the viscera so often found in connection with it, though I am not less persuaded of its taking place independent of all such derangements.

Called on to pronounce the precise character of the nervous state to which I have ascribed so much, I should candidly confess my inability to do it in any degree satisfactorily. Defective as is our knowledge of the nervous system, every speculation relative to it, cannot fail to be vague and uncertain, as indeed is shown in the prevalent pathology of the whole of its diseases. Contemplating, however, the prominent features of the case before us, I think it may be inferred that the nervous state in question, is the reverse of excitation, or that there is a want of innervation in the capillary circulation, and hence, at least the discolouration of the serous fluids. Disorder in other instances of the secretory and nutritive offices, seem to proceed from this condition, and I know not why the present should not be brought into the same category. Granting that these views may not be very definite, they perhaps, are so far of value, as calculated to awaken attention to an interesting subject, and by showing the

fallacy of the prevalent notions regarding it, direct curiosity to further investigations, to end, I trust, in happier results. Error may be deemed more pernicious than ignorance, and in getting rid of it, we shall always have a clearer insight into truth and knowledge.

From the preceding account of jaundice, it appears that to render the treatment appropriate, our remedies must be varied according to circumstances. It is the remote cause which usually consists of some pre-existing lesion, and not so much the icterose condition itself, to be deemed an effect merely, that we are called upon to remove, and so diversified are these lesions, no uniform or consistent plan of management can be adopted. We have seen that there is scarcely one pathological state of the liver which may not be associated with jaundice,—that it is incident to derangements of the spleen, pancreas, and upper portion of the alimentary canal, not to review further the subject. Nor is this the only difficulty to be encountered. Cases in the most opposite conditions of the system, independently of the state of the local affection, and exacting quite a different curative process, may be so obscurely designated as to elude all the powers of discrimination. For these reasons is it that our practice is nearly always tentative, and I fear too often degenerates even into absolute empiricism.

In the mildest, and particularly the forms of the disease where no fever or phlogosis exists, we commence the cure with evacuations of the primæ viæ, and emetics are deemed especially useful. Cathartics are also important, so much so indeed, as to constitute a very essential, and not unfrequently the only means. Beginning with purging by calomel alone, or with its ordinary adjuncts, the bowels are subsequently to be kept in a soluble state by magnesia, the neutral salts, or other gentle laxatives. Cremor tartar, as especially adapted to the occasion, has been strongly advised by Stokes, from its cholagogue properties. I have little experience in this application of it.

These two classes of remedies operate probably on nearly the same principle, removing causes of gastric or intestinal irritation, and by exciting the liver sympathetically through the impression made on the alimentary canal. In proof of the beneficial tendency of purging in particular it may be repeated, that jaundice is often removed by the spontaneous occurrence of diarrhœa, particularly

I suspect when proceeding from constipation, either of the upper or lower bowels.

Many years ago, I was called into consultation in the case of an eminent lawyer of this city, who had previously suffered very seriously from jaundice, occurring from time to time, and always attended by heavy epigastric oppression, which I speedily relieved, and ultimately cured, by the treatment I have recommended for duodenal dyspepsia. Two summers since, a lady from the interior of New York, sought my advice for a very inveterate attack of the disease, which she told me was marked more by a bearing down uneasiness, whether of the rectum or uterus, she could not determine, or perhaps both, and by strangury than any other affections. Finding her habitually costive, and presuming that the whole of this state of things was owing to lodgment of fæces in the colon or rectum, I purged her actively, and brought away several pounds of such a collection, after which she was much better, and soon got well by the rectification of the bowels.

The disease as I have presented it, is one of the simplest of its forms, and comparatively easy of cure. But it wears a more violent and complicated aspect, and demands a different course of proceeding. Coming on with fever, or a strong full pulse, and topical uneasiness, or this state at any time succeeding, venesection must be practised, and to some extent. Greatly may it be aided by local bleeding, which is too much neglected. The stomach, the duodenum, and the liver, are here one or all in irritation, congestion, or phlogosis. By a detraction of six or eight ounces of blood from the epigastric or hypochondriac regions, according to the indication, I have seen signal advantage to accrue, and where the means of such bleeding cannot be had, or has been sufficiently practised, blistering may be substituted or successively adopted. Not less are these measures required in the distractions of the head, which sometimes prevail for days, and relief not being afforded, prove one of the most afflictive and alarming attendants on the case, as denoting apoplexy, or some other horrible catastrophe of a similar kind. These occurring or being distinctly menaced, it need scarcely be remarked, that sanguineous depletion, with purging, is to be carried as far as circumstances will admit.

What, however, calls for the most vigorous measures is a relent-

less obstruction of the biliary ducts, from a calculus or spasm of these, or of the stomach or bowels, inducing the intense suffering formerly noticed. The object here is twofold, to induce relaxation, so as to overcome the impediment, and to obviate inflammation which would follow, were obstruction or the spasm to continue. To meet these views we resort to copious venesection, sometimes even *ad deliquium*,—to the warm bath—topical fomentations, to bleeding by cups or leeches—and to anodyne enemata.

Each of these remedies is of great value, and sometimes not the least so is the latter. From the extreme irritability of the stomach, we are often precluded from all administrations by it, and even when otherwise, I think in this mode it is most efficacious. Give opium itself when spasm is to be resolved, as preferable to all its preparations, excepting, perhaps, the Dover's powder. The dose should be large, and sometimes enormous, which is always well borne, where pain is excessive. I once attended a lady who suffered such agony from the irritation of gall stones, that she gradually in a long attack, came to take of laudanum, a wine-glassful several times in the twenty-four hours. There are cases in which a resort to tobacco enemata would be perfectly justified.

Emetics have been used with the same intention. Darwin tells us that in two instances he saw a very large number of calculi voided soon after the operation of vomiting, and similar facts are to be met with in other writers.

With regard to emetics, however, their use must necessarily be precarious and doubtful, to the expulsion of calculi, for which, they are most commonly directed. Calculi are found of various sizes, from that of a small granule to a hen's-egg, or even larger. The stone being so great as not to pass through the duct, vomiting obviously must be mischievous,—and it is utterly impossible to ascertain its dimensions. We can do no more here than to be governed by the symptoms. Much pain, fever, and general excitement existing, emetics are to be avoided. But under any circumstances, I would prefer the *insecacuanha*, the tartarized antimony, or the tobacco as an injection.

When relieved of this urgent affection, the case next calls for the means which are supposed by many to have the power of dissolving or otherwise destroying biliary concretions. But I

believe they operate on no such principle, and it is not easy to explain their efficacy. Be their *modus operandi*, however, as it may, experience has taught that some of them are useful.

Ether and the spirit of turpentine mixed, had once a high reputation, though now little or not at all employed. Ever having done good, I suspect, it was by their carminative or antispasmodic powers, and not from any efficacy as a solvent or deobstruent. Combinations of the alkalies, in the mild as well as the caustic state, have also long claimed, and perhaps justly, much attention. They are variously administered, though a very common shape, is that of *castile soap*. Equal portions of it, rhubarb and aloes, with or without calomel, I have often known to be effectual. The common potash mixture, prepared agreeably to the annexed formula, is likewise serviceable, in a table-spoonful dose occasionally.* But incomparably the best preparation which I have ever tried is the following popular nostrum.† As long as I have had any connection with the profession, has its reputation been familiar to me, and I could relate many astonishing cures by it, even where every thing else had utterly failed. Whence it originated, no one seems to have known, and it was commonly ascribed to some old woman. But I have lately ascertained, that it is the prescription of a regular practitioner of the state of Delaware, communicated to the Medical Repository, a Journal of New York, as early as the year 1798.

Many articles which must act in a very different mode from the alkaline remedies are entitled to confidence, among which are the acids, mineral as well as vegetable. Cider or lemonade I have known to be serviceable, though the sulphuric or nitric, or nitro-muriatic acid is more prescribed. As a general rule, however, the treatment consists principally in keeping up a pretty constant impression on the *primæ viæ* by purgatives, with which view, the pill or the syrup of the butternut, is well entitled to notice.‡

* R.—Potassæ Carbonas, Gum arab. āā ʒj.; Tinct. theb. gtt. xxx.; Ol. menth. gtt. x.; Aq. font. ʒiv.

† R.—Carbonas potassæ ʒj.; Sapon. Hispan., Gum arab. āā ʒss.; Alcohol. dilut. ℥b. To be frequently stirred, so that the ingredients may be well mixed and dissolved, which will require several days. The dose is half a wine-glassful to be taken for three successive mornings, fasting, and, if not relieved, omit it for one day, and then recur to the same mode.

‡ The Juglans Cathartica of Michaux.

Next, when the case does not give way, an alterative course of mercury should be resorted to, which proving inappropriate or useless, the nitro-muriatic acid exhibited internally, as well as applied externally, by frictions or a pediluvium, may succeed. It is at this juncture, that the taraxacum too, is much trusted to, by some practitioners, and colchicum has lately acquired some repute.

The reverse, however, in a degree of this plan of management, is recommended, consisting alone in the narcotics, as cicuta, hyoscyamus, belladonna, the prussic acid, &c. To alleviate spasmodic pain, or to quiet irritation, though perhaps, they may be more extensively useful, I give opiates, and for no other purpose resort to narcotics, believing that these are the chief purposes which they are capable of fulfilling at this stage of the disease. It may, however, be proper to mention, that independently of other evidence, several of the New England physicians have bestowed the strongest commendations on cicuta especially, among whom are the distinguished names of Jackson, Bigelow, Fisher, and Thacher. "When," says the last of these writers, "the dose is gradually increased, until its effects are distinctly felt in the head, the yellowness of the skin and eyes, in most instances, begins to disappear by the second day, and the disease is soon removed." Whatever it may be, surely this is an exaggerated account of its efficacy.

Of the icteric cases, dependent on disorganized conditions of the liver, and other structures, I shall here say nothing. These being merely effects of another disease, the cure can only be accomplished by its removal, to point out the treatment of which, is alien to my present design. Little more, therefore, remains to suggest as to the management of icterus, than that advantage is sometimes derived from the use of those mineral waters, which are found appropriate to the other hepatic or gastro-enteric derangements. Even a journey to the springs, and particularly when taken on horseback, is occasionally useful, not probably, as is generally imagined, so much by dislodging calculi, as invigorating the *primæ viæ*, or the secretory action of the liver. It is on the same principle, that electricity, and galvanism, have been applied to the cure of these cases, with however, no utility.

Too much, is usually done in the treatment of this disease. As long as the sallowness of the surface endures, it is thought by

many practitioners, and always by the patient, that there is occasion for the continuance of active remedies. But this colour of the skin, merely an effect, over which, we have little control, often continues long after the cause of it has ceased to operate, and when unconnected with positive disease, may be disregarded, or left to the natural, or recuperative powers to remove. From an opposite course, harassing the system, and especially the primæ viæ, by such measures, I have certainly seen a very serious detriment to health induced, and in some instances permanent and invincible injury. Convalescence is more effectually promoted by a duly regulated regimen, very similar to that in dyspepsia, and by the moderate use of the vegetable bitters, or mineral tonics, particularly the mildest of the martial preparations, so united with rhubarb as to obviate costiveness. An oppression in the region of the duodenum, is not unfrequently felt an hour or more after a meal, owing perhaps, to an accumulation of food from torpor of that intestine, to relieve which a couple of ounces of the infusion of senna and gentian, in the proportion of two drachms of the former to a drachm of the latter in a pint of boiling water, has been recommended very strongly. But I have found the dinner-pill preferable.

As to the more inveterate forms of the disease, the green or black jaundice, it is confessed by Baillie, the highest authority on the subject, and which seems to correspond with common experience, that they are nearly intractable, no permanent salutary effect being made on them by any ascertained means.

Mercury has very little influence. "The kind of induration," he tells us, "which attends the disease, is not affected by it in the same manner as those indurations of the liver usually are, which sometimes accompany yellow jaundice. Mercury, however, will sometimes alleviate for a time the uncomfortable feelings of the patient, and induce him to think he is getting better, without inducing any substantial benefit. The daily use of neutral salts in small doses, has appeared occasionally to have been of some advantage, but of all the cases of green jaundice, which have fallen under my notice, I recollect two only which recovered."

An icterose predisposition being established and which is generally laid by an attack of any severity, a speedy relapse, or more remote recurrences of the disease, are very apt to take place. To guard against these is an important consideration, as the consti-

tution, thus repeatedly assailed, becomes disordered, and ultimately a train of morbid consequences arises of the most fatal import. It will be well studiously to avoid all the exciting causes, and which are chiefly embraced in want of attention to the bowels, inappropriate clothing, indiscretions in diet, including stimulating drinks, exposure to the fluctuations of weather,—inordinate exercise, or the reverse, habits of indolence, the indulgence of intemperate passions, or the cherishing of anxieties, or carking cares. This is a prophylactic precept, which should always be inculcated, and strictly observed¹.

ON
SOME OF THE DISEASES
OF THE
S P L E E N .

SPLENITIS.

AN acute inflammation of the spleen originating in the viscus itself, as a mere phlegmasia, or independently of fever, is so rare an event, that I am not aware it has ever come under my observation, and the same is said by Abercrombie, whose experience is ample. Cases supposed at first to be of this nature, I have uniformly found to turn out to be engorgement of the organ, or phlogosis of its integuments, or of the left lobe of the liver. Yet I do not deny the occasional existence of the affection, as well on account of the probability of its occurrence, as that several authenticated cases of it having been lately reported.

The inflammation, I have said, may be seated in the membranous coverings, or in the substance of the spleen. These consist of the peritoneal coat and of a soft fibrous capsule, the former of which is more frequently affected than either of the other varieties.* Neither this, nor phlogosis of the capsule, is the condition, however, to which I allude,—splenitis, as usually understood, being seated in the parenchymatous portion.

Not having witnessed a well ascertained case of it, my remarks on it will be short, and of course, entirely borrowed.

* "I have repeatedly seen," says Abercrombie, "the spleen in a thick dense covering of false membrane in connection with peritonitis, without any disease of its substance," &c.

By the disciples of the school of Stahl, who claimed a peculiar attention to the disease, it is affirmed, that an attack is ushered in with singularly violent rigors, succeeded by intense heat, intolerable thirst, sometimes delirium, or even phrenzy, great dyspnœa, the pulse of the correspondent side sometimes partially suppressed, often intermittent, weak, and not quick or irritated, the whole returning in quartan paroxysms, and ending most commonly by resolution, affected by epistaxis from the left nostril, or by copious hæmorrhage, from the viscus itself.

This is partly a fancy sketch, and the case with greater probability is now described, as coming on with the ordinary phenomena of pyrexia, chills and flushes, soon followed by anxiety and straitness about the præcordia, some difficulty of respiration, and dry cough,—tension, and pain in the left hypochondrium, of a pungent, pulsatory, or burning character, increased by pressure, sometimes pervading the whole abdomen, shooting through the diaphragm up to the left shoulder,—nausea, or violent vomitings, some cerebral disturbance evinced by giddiness, especially when the head is raised, or distressing aching of it. Continuing thus for a time, fever becomes more clearly evolved, with a full, and irregular pulse, slow, hobbling or even intermittent, in some instances attended by hæmorrhage from the nasal or hæmorrhoidal vessels, or those of the stomach or bowels, or, perhaps, the spleen itself, the blood which is dark, being discharged in the latter instances, by puking or purging, or both, and the skin occasionally a lemon or orange or saturnine hue. These symptoms, however, —the abdominal hæmorrhages, and change of complexion, are not frequent occurrences in acute splenitis.

Of the etiology of the disease, I have only to remark, that it is represented to be the same, or nearly so, as of acute hepatitis. But while originating in miasmatic influence as a common source, either directly, or through the medium of fevers, I am persuaded, that the cold stage of intermittents, and especially of a malignant character, lays the foundation of this, and most other affections of the spleen. From all that I have observed, I can scarcely doubt its being nearly always engorged at this period;—and it is not to be conceived, that such an anormal condition could be repeated, as it is in each paroxysm, without leading to some positive derangement, of more or less severity. It is hence, that we find splenic lesions so constantly in connection with fevers of the kind. Further

particulars in which the etiology of the disease of the two organs vary, will be subsequently indicated.

Between acute splenitis, and hepatitis, there must be so close a similitude, as not always to be readily distinguished. The position of the pain, the sallowness of the skin, which is deeper, and more common in the latter, and the appearance of the stools, are the most characteristic signs of hepatitis, and where these are wanting, the presumption is, that the other viscus is affected. But this is a very imperfect diagnosis, and I scarcely know how to improve it. There is no pathognomic symptom of splenitis. The lesions of many of the viscera simulate it. But by pursuing the same course as in hepatitis, we may negatively arrive at a pretty satisfactory conclusion. Collect and compare the symptoms of the different organs, and see which preponderates.

Cæteris paribus, I should presume, an inflamed spleen to be less formidable than an inflamed liver, and the grounds of prognostication essentially the same.

Not a little extraordinary is it that its affections should so often prove alarming, seeing its apparently trivial importance in the animal economy. From remote antiquity, to the present day, we have accounts of the spleen having been removed by accident or design, without any very serious inconvenience, or detriment to health, even in the human species. Distrustful as we may be of these, the fact in relation to animals, is indisputable. By several of the older writers, are such experiments reported, and lately, we have heard that on a repetition of them, at Paris, out of forty dogs selected for the purpose, one half recovered perfectly in a short time,—the residue perishing from abdominal inflammation. During convalescence, they ate and drank, as usual, digested well, nor were any of the functions appreciably disordered. The ultimate result of these cases, or what became of them, I am not informed. It is also curious, though the vessels were not tied, no hæmorrhage ensued. Nothing more was done than merely closing the external wound.

Examined *post-mortem*, a very usual appearance is said to be phlogosis of the peritoneal covering, with extravasation of lymph, and false adhesions to the neighbouring parts. The fibrous capsule is more rarely affected, and its changes vaguely noticed. Generally, the viscus itself is of a darkish gray, or brownish red colour,—seems swollen, and may be enlarged to various dimen-

sions. Cut into, its texture is found charged with sanies, or black dissolved blood, or in rarer instances, with pus infiltrated, or collected in a series of small, or in one or more large abscesses, or its parenchyma, very friable or pultaceous, or quite deliquescent. It is this condition, I suspect, which has sometimes been mistaken for gangrene, though, perhaps, such may really take place. As not without interest, I may add that Smith, a late writer, affirms, that the spleen in fever, particularly low fever, is very constantly to be met with materially altered in its aspect, and deranged in structure, its natural purple colour converted into a deeper and darker tint, and its substance on the slightest touch, breaking down into an almost fluid mass. Louis has made pretty nearly the same report, or that out of forty-six cases of typhoid fever, which he examined, in four only, was the spleen unaffected. Three-eighths of the cases exhibited merely an enlargement of the viscus to thrice its natural size, three-fourths softenings,—a fifth part of which to such a degree, as to be readily reduced to a pulp. The observations of Tweedie, are to a similar effect, and Wardrop, Pearson, Vetch, Dawson, and the other historians of the Walcheren fever, state, that the spleen was usually found increased, weighing from three to five pounds, seeming to be a mere sack, filled with a fluid resembling tar.

Excepting the single remark, that there is much reason to believe, that inflammation of the serous envelope of the organ may exist independently of splenitis proper, and is frequently mistaken for it, I have nothing further to say of the pathology of the affection. This of course, must be similar to that of the phlegmasia generally, of the viscera, modified only, by peculiarity of structure.

For the treatment, I may be content also, with a reference to my observation on acute hepatitis,—the same remedies, regulated by the same principles, having nearly a common applicability to the two cases. The only exception, perhaps, regards the use of mercury, which, from the texture of the spleen, cannot be urged as freely in its affections. Great caution, indeed, is required here in the administration of the article, the object being to attain its alterative influence,—carefully avoiding salivation, which is invariably mischievous by breaking down as it were, the organization of the viscus. Being less apt to produce inordinate effects, the blue pill, in small doses, should always be preferred.

CHRONIC SPLENITIS.

Even those who are incredulous of the existence of acute, do not doubt that the spleen is liable to sub-acute or chronic phlogosis. The difference in this respect admits of an explanation. Endowed with little sensibility, those circumstances by which inflammation is readily excited in more susceptible parts, here operate slowly, and seldom or never with intensity.

This, in the outline, does not vary materially from the acute form of the disease. With a disturbed circulation, rather than well defined fever, we have an uneasy, dull, tensive sensation in the part affected, with a constant drawing downwards in the erect posture, or when lying on the right side, towards that direction. Darting pains are occasionally felt over the abdomen, and there is a pretty constant ache under the left scalpula. The belly is more or less tumid, and renitent, even where no effusion has taken place,—the bowels costive or irregularly open, the stools of an unnatural, dark colour, and consistence, with scanty urine. Digestion is feeble, the appetite bad, and the tongue loaded. Dyspnœa often exists, with dry spasmodic cough. The difficulty of breathing, indeed, is sometimes attended by great anguish, and even a sense of impending suffocation. There are occasionally headache, hebitude of the senses, and emphatically *splenetic humours*.

As gloom and melancholy were ascribed by the ancients to the right, so were petulance and waywardness to the left hypochondriac. Though we, perhaps, do not now observe this nicety of distinction, the general fact, of the mind being usually much disordered, with proneness to dejection of spirits, or peevishness, or sullenness of temper in these visceral diseases is universally confessed. Blackmore the poet, who having been also a physician, is of higher authority, declares that :

“The *spleen* with sullen vapours clouds the brain,
And binds the spirits in its heavy chain.
Howe’er the cause fantastic may appear,
The effect is real, and the pain sincere.”

Gradually the external integuments become soft and inelastic, and the complexion leaden, with a still darker line under the eyes,

and often the various shades of sallowness exist even to the icterose complexion. Debility and listlessness are complained of, and sooner or later, dropsy usually appears, beginning with œdema of the ankles, which progressively spreads,—then ascites, and possibly hydrothorax, or perhaps a copious hæmorrhage ensues of dark blood, which either relieves or proves fatal. But though such is its more usual aspect and terminations, it sometimes exhibits greater activity of character—ending in suppuration. The symptoms of the latter are, for the most part, very obscure, sometimes taking place without any indications whatever,—and rarely characteristic of such an occurrence. An increase of emaciation, with hectic fever, are the common results.

This and every other affection of the spleen, the chronic more conspicuously, are found to abound in the same localities, as those of the liver. The chief difference indeed, seems to consist in the former requiring for their development, rather an excess of moisture than heat, while the latter are promoted by a high temperature alone. Disorders of the spleen of every description are hence endemic to the humid districts of Italy, Spain, France, Holland, the British Isles, India, South America, the United States, and probably, every portion of the world, combining this quality with even a moderate degree of heat.

An actual examination will enable us, for the most part, independently of symptoms, to pronounce the spleen to be affected, even when it is moderately enlarged. I am aware that this has lately been denied by Piorry, of France, who alleges that, on the contrary, it is very often impossible to do it by the touch, though it be of considerable magnitude, owing to its ascending upwards towards the diaphragm, instead of descending below the ribs. But really, it seems to me that this objection is very futile, not at all confirmed by practical experience, and that, perhaps, he was induced to raise it to afford an occasion of recommending percussion, to which he is devoted, and especially his pleximeter, an instrument invented by him for the purpose. Granting that the organ may be sometimes in the state he describes it, I should still be very distrustful of the power of such a process to elicit any distinct information of the nature and condition of the case. Be the mass in the cavity of the abdomen whatever it might be, the left lobe of the liver, the kidney, which has been known to rise up, quite out of its normal position, a thickening of the omentum,

or any adventitious tumour, the sounds in all these instances, must be the same, or so much so, as to prove vague and indiscriminative.

Nevertheless, in some instances the spleen is so reduced in its dimensions as not to be felt, and when otherwise, it is difficult, and sometimes utterly impracticable, to determine the precise lesion. Being enlarged, all such states are betrayed by nearly the same symptoms. It may, however, be remarked, that when its investing tissues are concerned, the pain is more sharp or lancinating, the tenderness greater, the entire sensation more superficial, with a quicker and harder pulse than in the derangements of the parenchymatous structure. Let the facts be also remembered, that the fibrous capsule especially, as well as the nerves, are liable to a species of rheumatic, arthritic, or neuralgic irritation which may be mistaken for inflammation.

Of the other organs, the sufferings of the liver have the closest resemblance to those of the spleen, between which the prominent differences were formerly pointed out.

Chronic splenitis is usually less serious than a correspondent affection of the liver. Even when unable to remove the affection entirely, it has on the reduction of the phlogosis, remained without great inconvenience for many years. Generally, however, such cases are curable,—though some of them baffle all our efforts. Disorganizations here, have taken place.

From the manner in which an abscess ruptures much may be learned as to the probable result of the case. The matter may find its way out externally, or through the parietes of the abdomen, over the spleen, or pass out by the umbilicus,* or be discharged into the peritoneal cavity, or into the intestines, large or small, or into the stomach, and even into the thorax. Examples of all these modes are to be met with in our medical records. Which of them is the most favourable or the reverse, can readily be determined, after my remarks on the same, or nearly the same events in regard to the liver.

Those anatomical phenomena proper to a chronically inflamed state of the organ, are very much diversified, and adding such as appertain to other pathological conditions of it, which from the want of the power of discrimination, is usually done, they become

* Abercrombie.

infinitely varied, and multiplied. The appearances that first occasionally attract attention, are the changes on the surface of the spleen,—the deposition of lymph, and false adhesions with the adjacent parts,—or its peritoneal coat, thickened or otherwise degenerated. As in acute splenitis, we are without any precise information of the lesions of the fibrous capsules. It has, however, been found affected, though seldom,—softened even to diffuence, or on the contrary, hardened, smooth, and polished.

Great alterations are incident to the substance of the viscus itself. The spleen may be prodigiously augmented, filling up nearly the whole cavity of the abdomen. Good quotes a case of its weighing ninety-three pounds, which no doubt is an exaggeration. Bonet and Sauvages, each, however, tell us of one, of more than a third of this weight. We are assured by Abercrombie, that he has seen it often, of twelve times its natural size. Greatly overgrown,—I have met with it, though not to such an enormous extent. There is in some of these cases, merely hypertrophy, or without much change of structure. But it may be otherwise. An instance, is mentioned in the Transactions of the Academy of Sciences, of France, which contained thirty pounds of purulent matter, and another in the same work, where eight pounds were drawn off by tapping. The next day on the death of the patient, a sac was found eighteen inches long, and twelve broad, and within it seven pounds more of pus.

Besides the states of enlargement, or extensive abscesses, on other occasions, we meet with pus infiltrated through the substance of the spleen, or mixed with blood, in the cells, or accumulated in small pouches, or the organ is so soft, as to be diffuent, or like a black pultaceous mass of blood, or as affirmed, may be really gangrenous or melanotic. Conversely, we find it indurated, or scirrhusified, or converted partially into a sort of cartilaginous, or osseous, or stony degeneration. The latter are rare, though certainly sometimes occurring, since Morgagni uses the phrase in relation to this state of the spleen, "*ossea lapidum*."

More frequently we see it tuberculated or infested with hydatids, or extremely reduced in size, even so shrivelled away as hardly to be recognized. I have seen it in several instances, not weighing more than three or four ounces, and Litré has given a case of only an ounce and a half.

No pathological discussion can be required here, after what was said on the correspondent condition of the liver.

As it is only in the more simple of these affections, where perhaps, chronic phlogosis alone, or mixed with congestion, exists, without any material structural deviations, that we can hope to be of much service, the treatment may be very summarily stated. The remedies consist of venesection, repeated as circumstances shall require, the frequent application of cups or leeches, and ultimately a succession of blisters or an issue over the affected part. Evacuations of the bowels by calomel, and its usual combinations, are next highly useful.

Cruveilhier has lately corroborated by his testimony the experience of his predecessors, as to the decided efficacy of active and continued purging under these circumstances. This having been carried sufficiently far, not a little is urged in favour of a union of purgatives and tonics, as an infusion of senna and gentian. Yet more is alleged of the "Bengal Spleen powder," or a mixture composed of rhubarb, jalap, scammony, and cream of tartar, with columbo, and the sulphate of iron, taken three times a day, in such doses as to keep up regular, though moderate, evacuations. Cures are declared to be wrought by this treatment, in fifteen or twenty days. Combinations of aloes and steel are also strenuously recommended.

Of late the importance of inducing hæmorrhoids is insisted on, and it is, perhaps, to the irritation from the drastic articles on the lower bowels, that their efficacy is to be ascribed. But with the same intention would not repeated applications of leeches around the anus prove far more decisive?

Emetics have by some practitioners been advised in the absence of inflammation, to excite the torpid viscus, and we learn from a respectable source,* that vomiting occasionally induced by a cataplasm of tobacco to the side, has, in some instances, been eminently efficacious. Of this practice I have no experience. Certain deobstruents, as the taraxacum particularly, are entitled to more confidence. But it is to an alterative course of mercury that we are mainly to trust, on the failure of the preceding measures. Contrary however to what I had considered an established practice, the following language is held by Abercrombie on this point: "It is now generally admitted," says he, "that in the treatment of enlarged spleen, mercury is uniformly, and highly

* Stedman.

injurious, producing mortification of the mouth and rapid failure of strength." Twining, as well several other of the late writers, certainly hold the same language. But Cullen, Good, Thomas, Pemberton, &c., maintain the reverse, and assimilate the treatment of the splenic, very much to that in the hepatic affections. Nor does Annesley, one of our most recent and respected authorities, who practised long and extensively in India, pursue a different course. Concisely stated, his practice is to give a large dose of calomel three or four times, on alternate nights, to be worked off the next morning, and then the blue pill with aloes and myrrh. Not improbable, I think, where mercury has proved so detrimental as represented by some, certain states of congestion hereafter to be indicated, were mistaken for inflammation, it being very apt to operate in this way, under such circumstances, or that it was abused. Easily may mischief be avoided by a due regulation of it, and when appropriately applied, I am persuaded, it will prove as safe, as it is affirmed to be efficacious by the long, ample, and constant experience of the practitioners of this country. Let me however, repeat an admonition which I suggested on a recent occasion, that the blue pill should here also be preferred, as not so apt to affect the constitution severely.

Nitro-muriatic acid is favourably spoken of by some, and, perhaps, the preparations of iodine may be deserving of trial,—though they have not much of my confidence.

ENGORGEMENT OF THE SPLEEN.

Considering its structure, which is essentially cellular, and still more the sluggishness of its circulation, we should *a priori*, be led to conclude, that in a greater degree than any other organ, the spleen might be exposed to oppressive congestions, and such is the fact.

An hypothesis was, indeed, advanced by Heister, and afterwards very ingeniously maintained by the late Professor Rush, which alleged, that in the more vehement commotions of the system, the spleen serves as a *diverticulum* to the general circulation, by accumulating within itself a large portion of blood. Confirmatory, perhaps, of this conjecture, it is stated by Andral, that in some of those excruciating experiments on animals, by

the French physiologists, productive of great disturbances in the circulation, heavy engorgements of the spleen were often observed. As to the salutary tendency of the design in the prevention of vascular lesions, as supposed by Dr. Rush, whatever view may be entertained of it, I think, on the whole, there can be little doubt of the occurrence itself, under different circumstances.

The symptoms of this congestive condition are, in some instances, so analogous to those ascribed to splenitis, that I might almost be satisfied with a reference to the preceding account of the latter. That the two cases have often been confounded, I am strongly inclined to suspect, and, perhaps, we should be safe in affirming that in all recent attacks of the spleen itself, different as may be the ultimate issue, engorgement is the primary state, which by continuance, may lead to inflammation, and its diverse degenerations.

There is in each condition, with the same sense of tenderness, and painful distension in the left hypochondrium, dull or lancinating pains, in various directions,—præcordial uneasiness, difficult respiration, wildness and distraction, and a full, active, or slow and irregular pulse. The distress may, indeed, be so extreme, as to amount to agony, and were not relief promptly afforded, life would be extinguished.

As long ago as 1805, my attention was attracted to this affection, by a tremendous attack of it, which came under my care. The case, which will illustrate the severest form of the disease, was that of a young married woman, who becoming fatigued by long standing at the launch of a ship,—having previously walked a considerable distance, in extremely hot weather, was suddenly seized with a sense of great fulness, and tension of the left side, as if it were bursting,—embarrassed respiration, menacing suffocation,—livid countenance, distraction of mind, protuberant eyes, cold skin, and a feeble hurried pulse, with altogether the most alarming appearances. An examination of the side, left no doubt as to the nature of the affection, and in the manner presently to be detailed, she was relieved.

The spleen being ruptured, which sometimes happens, there is an immediate failure in the vital forces,—the pulse sinks, the skin becomes cold, and collapsed, with extreme anxiety, præcordial, or epigastric oppression, and retchings or vomitings.

Commonly we meet with this aggravated affection, in the cold

stage of malignant fevers, particularly of intermittents,—and I have repeatedly seen it as the only symptom of the paroxysm. On other occasions it is brought on by a collapse from cold, or the exhaustion of heat. Twice I have witnessed it from an immersion in a common cold bath, and in one instance, by that of the Yellow Springs of this vicinity, the water of which, is of an exceedingly low temperature. Not uncommonly does it proceed from the exhaustion of long exposures to our summer heat, and particularly, among our labouring people. Extraordinary exertion of any kind, by running, leaping, &c., may induce it, and I once knew it to follow the fatigue of standing in one position for a length of time, the details of which case I have just given. But usually it is brought on more slowly, by the gradual operation of miasmata, and though sometimes, under such circumstances, it attains to a considerable height, it is mostly of less severity.

The suddenness of the attack, the peculiarity of the pulse, and the absence of fever, are the chief circumstances which distinguish it from splenitis.

For the most part, it is curable, and rarely proves otherwise, except an extravasation of blood takes place in excess, or the spleen itself is ruptured, or where it is an incident to pernicious intermittents, or other malignant diseases, in extremely depressed systems. Even in the worst of these cases, that of rupture, recoveries may possibly take place, as cicatrices have been detected from lesions of the kind.

An autopsic inspection exhibits, sometimes, the highest possible grade of engorgement. Cruveilhier, however, tells us, that he has also remarked large deposits of blood in the substance of the organ, with all the other phenomena of apoplexy of the brain, lungs, or liver. These occurred in intermittents, and in horses from violent efforts. Bailly, the French writer, gives moreover two cases of a like nature, in intermittent fever. When the substance of the viscus is lacerated, the rent may be very trivial, or considerable, and of different figures or shapes. Great effusions of blood are observable, though sometimes slight, clotted, or more fluid.

As elucidatory of the whole of this pathological condition, it will suffice to remark, that it essentially consists in congestion, which however may depend on an active or forcible concentration of blood in the viscus, or in an exhaustion of those powers of reaction by which an equipoise in the circulation is restored.

Nothing can be more simple than the management of this affection in a vigorous constitution. The remedies are copious venesection, topical bleeding, by cups in preference to leeches, as more expeditious,—then blistering and active purging with calomel, and those articles which quicken its operation. This is the course to be pursued in such attacks. Coming on however, in certain enfeebled states of the system, the case is to be managed more cautiously. Not more shall I now say in regard to this point, than that a practice consisting of a simultaneous employment of sanguineous depletion by cups, with stimulants, tonics, and revellents, proves the most efficient. It is here that the sulphate of quinine has acquired the highest repute. But to be effectual it must be very liberally administered. As usually given it is entirely nugatory. Five or ten grains may be directed at once, to be repeated in an hour, in great emergencies, and I have heard of doses of double, treble, or quadruple, and even to the amount of a drachm. The quinine has hitherto been chiefly, or perhaps exclusively, used in cases dependent on miasmatic influence. But, though better adapted to these, I can discover no reason why it should not be applicable to the other form of the disease, where tonics are proper. I must not omit to mention that opium is a very important adjunct in the management of such congestions, and especially when of the former character. It operates by exciting a reaction, which removes the concentrations of blood. Combined with the quinine, I have found it to be an excellent practice. But I cannot forbear protesting against the exorbitant use of either of these articles. Never have I met with an occasion where I thought it warrantable, and in regard to the quinine, I know of the most fatal consequences from it. Cerebral and nervous distress, very alarming, is common,—apoplexy, palsy, and blindness, do happen,—and lately reports have reached us from Paris, of sudden death in several instances from a drachm dose of this medicine.

CHRONIC CONGESTION OF THE SPLEEN.

Between this and chronic splenitis, much similarity prevails in their external physiognomy. Carefully examined, however, it will be perceived that in the former, there is more sense of weight

and oppression in the spleen, little or no sensibility on pressure, greater sluggishness of the circulation, and liability to hæmorrhagic and hydropic effusions. Examples of the latter coming within my own knowledge, where gallons of blood were lost by vomiting and purging, were, I suspect, of this nature. Commonly, however, we meet with congestion of this organ in a mitigated degree, denominated splenica. But as this title is a diminutive of splenitis, it has been unhappily selected, or inaptly applied, conveying as it does, an erroneous impression of the pathological condition.

The case I have now in view is known by the vulgar appellation of *ague cake*. It is of slow formation, nor in its beginning, progress, or at its height, may it be marked by any decided local or constitutional disturbance. An enlargement of the spleen, is obvious,—some inconvenience will be complained of, from the weight or uneasiness excited by exercise, with short and hurried breathing,—and these are the chief inconveniences experienced—the general health being tolerably well preserved.

In other instances, however, it is very much the reverse, or with constant pain in the part, pretty acute or of a graver description, we have sometimes recurrences of paroxysms of intermittents, or more permanent febrile irritation, ordinarily exacerbated at night, ending in colliquative perspiration, attended by change of colour of the skin, pale, or of the various shades of yellow, or of a saturnine hue—impeded respiration, and short convulsive cough—hæmorrhage occasionally, or dropsy, or diarrhœa,—emaciation, concealed partly by bloatedness, extreme languor, and disinclination to motion,—dejection of spirits, fretfulness of temper, and torpor of mind.

Even still more inveterate and alarming states of it, indicative of far greater depravations of the system, are presented, and particularly when occurring among the poor and destitute, ill fed, ill clothed, and ill lodged, with drunken and other bad habits. Not uncommonly have we, under such circumstances, the strongest evidence of a universal cachexy of the solids and fluids. Nutrition in all its series of operations, seems defective, or nearly suspended. There is neither digestion, nor assimilation,—the aspect is strikingly anemic, or of a deadly white, the tendency to hæmorrhage, or serous effusions, or both, very great and sometimes to a fearful extent. The hæmorrhagic disposition is, indeed, so considerable, that copious flows of blood take place from

the most trivial injuries, as a slight cut, or scratch of a pin, or the bite of a leech, &c. The blood, however it may escape, is uniformly dark, and very thin, or if a coagulum forms, which is seldom, it is black and soft, denoting an imperfect decarbonization, as might be presumed from the disturbance of respiration incident to these cases. Gangrenous or foul sloughing ulcers, appear in different parts of the body, difficult or impossible to heal,—and I have seen the same description in the mouth, or lips, or gums, which we are told have in some other instances led to an exfoliation of the jaw, and loss of the teeth. No disease, in short, produces a more general distemperature than some of these splenic affections.

In all their diversities, they abound in damp, miasmatic districts, and occur especially in young persons, who are partially acclimated, without any antecedent disease. But under other circumstances, they are more frequently the result of autumnal fever,—mostly ill cured intermittents, neglected, or improperly managed.

From the description I have given of these acute and chronic congestions, I think they need not be confounded with each other, or any of the diseases of the spleen or other organs, and I shall therefore, forbear to waste time by enumerating the signs of discrimination. Nor can it be required of me to note with any particularity, the indications by which our decision of the event of a case is to be governed. Chronic congestion, when excessive, is alarming: whereas, the other or milder cases, are the contrary, and may not excite solicitude, unless by protraction the general dyscrasy noticed, has been induced.

Cadaveric examinations, show in the extreme condition, an enormous distension of the spleen, so as sometimes to occupy a considerable portion of the abdominal cavity, very friable, or softened, or even diffuent, resembling black concrete or fluid blood. It has, indeed, been compared to a large clot of blood wrapt in a thin membrane. But in more moderate cases, with various gradations of these states, there is induration of parts of the spleen with several of those other degenerations, or adventitious products, incident to chronic splenitis.

Nothing more occurs to me to remark concerning the pathology of this form of the disease, than that, while mostly, it is of a purely congestive nature, it sometimes, from duration or otherwise, be-

comes partially inflammatory, the two conditions, existing in diverse proportions, in different cases.

Generally, we commence the cure of these cases in vigorous individuals, by moderate venesection, or preferably, by cupping, and by very active purging, again and again renewed, with those articles which operate on the lower bowels powerfully. Every one of experience seems agreed as to the propriety of the latter practice especially. Twining, who has written well on the subject, having² seen much of the disease in India, strongly recommends the following mixture, which is a modification of the celebrated Bengal powder.*

Excepting that mercury is less serviceable, and should be more cautiously directed, than in hepaticula, and that the martial preparations alone, or in unison with the sulphate of quinine, the latter of late greatly extolled, are of a wider applicability, and of greater utility in the splenic lesion, I know not of any other peculiarity in the cure of the two affections.

But there are some remedies among the native physicians of India, in such high repute, as perhaps, to deserve attention. Twining, especially, commends their efficacy. They all seem to have garlic as the basis, and are employed after great freedom of purging, with which, the cure of such cases seems always to be commenced.†

What is the value of these prescriptions, I know not myself. But independently of the respectable testimony in their behalf, we might presume from the activity of the ingredients, that they are not without efficacy. Garlic especially, is most grateful, and useful to the drunkard, who is so liable to splenic derangements.

Essentially the same regimen is proper here, as in the hepatic lesions, under the several diversities. The chief difference indeed, regards the greater utility of certain modes of exercise in the chronic affections of the spleen, as by walking, riding on

* R.—Pulv. jalap, Pulv. rhei, Pulv. columb., Pulv. zingib., Supertart. potass. aa ʒj.; Ferr. sulph. ʒiiss.; Tinct. sennæ, ʒiv.; Aq. menth. ʒx.—M. The dose ʒjss.

† R.—Allium sativ. bulb. gr. xx.; Aloes, gr. vi.; Ferri sulph. gr. iv. These articles are to be made into pills, and taken every morning.

R.—Allium sat. bulb. ʒviii.; Aloes, ʒi.; Alcohol dilut. ℥ij.—To be thoroughly digested, and from three to four drachms in an equal quantity of water, taken twice a day. On some occasions, vinegar is substituted in the place of brandy, and of this preparation, the same amount is directed.

horseback, swinging, and sailing, &c. These are very effectual in the dispersal of the torpid congestions of the viscus, and, therefore, should never be neglected. Beneficial merely from the motion, swinging and sailing are still more so, when nausea, and vomiting are induced. I have known several instances of enormous spleens very speedily removed by sea sickness, and also, by that from swinging. As to diet, I have only to observe, that some of the writers of the East Indies declare, that milk is singularly pernicious in the whole of the splenitic disorders, in what way, however, is not stated. This pernicious tendency I have not perceived, and whether it belongs generally to the article, or is confined to that of India, owing to peculiarity of climate, or to the food or management of cows, I will not say. It is satisfactory to learn, that though this condition sometimes leads to disastrous results; it will in other instances endure for a great length of time, then spontaneously subside, and still more frequently yields to a change of residence exempt from miasmatic influence, or to the waters of some of our mineral springs, the warm or hot springs of Virginia particularly, to which I am inclined to attach the more value, from the efficacy of the common vapour bath under similar circumstances. The latter, indeed, is a most valuable resource.

THE END.

CYCLOPÆDIA OF PRACTICAL MEDICINE.

LEA AND BLANCHARD,

PHILADELPHIA,

WILL PUBLISH

THE CYCLOPÆDIA OF PRACTICAL MEDICINE;

COMPRISING

TREATISES ON THE

NATURE AND TREATMENT OF DISEASES,

MATERIA MEDICA AND THERAPEUTICS,

MEDICAL JURISPRUDENCE, &c. &c.

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THOROUGHLY REVISED, WITH ADDITIONS,

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MORBID STATES	ELECTRICITY	MALARIA AND MIASMA	TRANSFUSION
OF THE BLOOD	ENDEMIC DISEASES	PERFORATION	TUBERCLE
CLIMATE	EPIDEMICS	PSEUDO-MORBID AP-	VENTILATION
COLD	EXPECTORATION	PEARANCES	MINERAL WATERS

and those of various general articles on the pathology of organs. It will be found, too, that admirable articles from the best sources have been inserted on the important subjects of

DISEASES OF WOMEN AND CHILDREN, AND OF MEDICAL JURISPRUDENCE.

In order, however, that the nature and value of the work may be fully understood, a list of the articles, and the names of the contributors, is appended.

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To adapt it to the Practice of this country, and to thoroughly revise the various articles, the attention of

PROFESSOR DUNGLISON

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Abscess	Dr. TWEEDIE.	Cyanosis	Dr. CRAMPTON.
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
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FIG. 4.



FIG. 5.



FIG. 6.

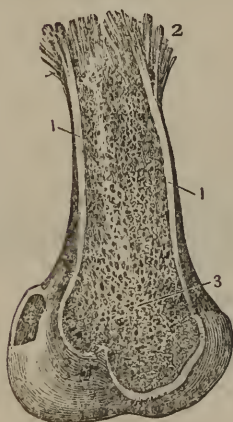


FIG. 7.



ANATOMICAL ATLAS.

FIG. 4.

A LONGITUDINAL SECTION OF A FEMUR, SHOWING THE CELLULAR STRUCTURE AT ITS EXTREMITY.

FIG. 5.

A LONGITUDINAL SECTION OF A TIBIA, SHOWING

1. The Compact Structure.
2. The Cellular Structure.
3. A Transverse section of the Femur, showing its Compact Substance, its Internal Cellular Structure, and the Medullary Canal.

FIG. 6.

THE TEXTURE OF A BONE AS SHOWN IN A HUMERUS, AFTER MACERATION IN DILUTE ACID.

1. 1. The Compact Matter as usually seen.
2. 2. The same split, so as to show the Longitudinal Fibres composing it.
3. 3. The Internal Cellular Matter.
4. 4. The Bone seen under its Articular Cartilage.

FIG. 7.

A VIEW OF THE CONCENTRIC LAMELLÆ OF THE COMPACT MATTER OF A BONE.

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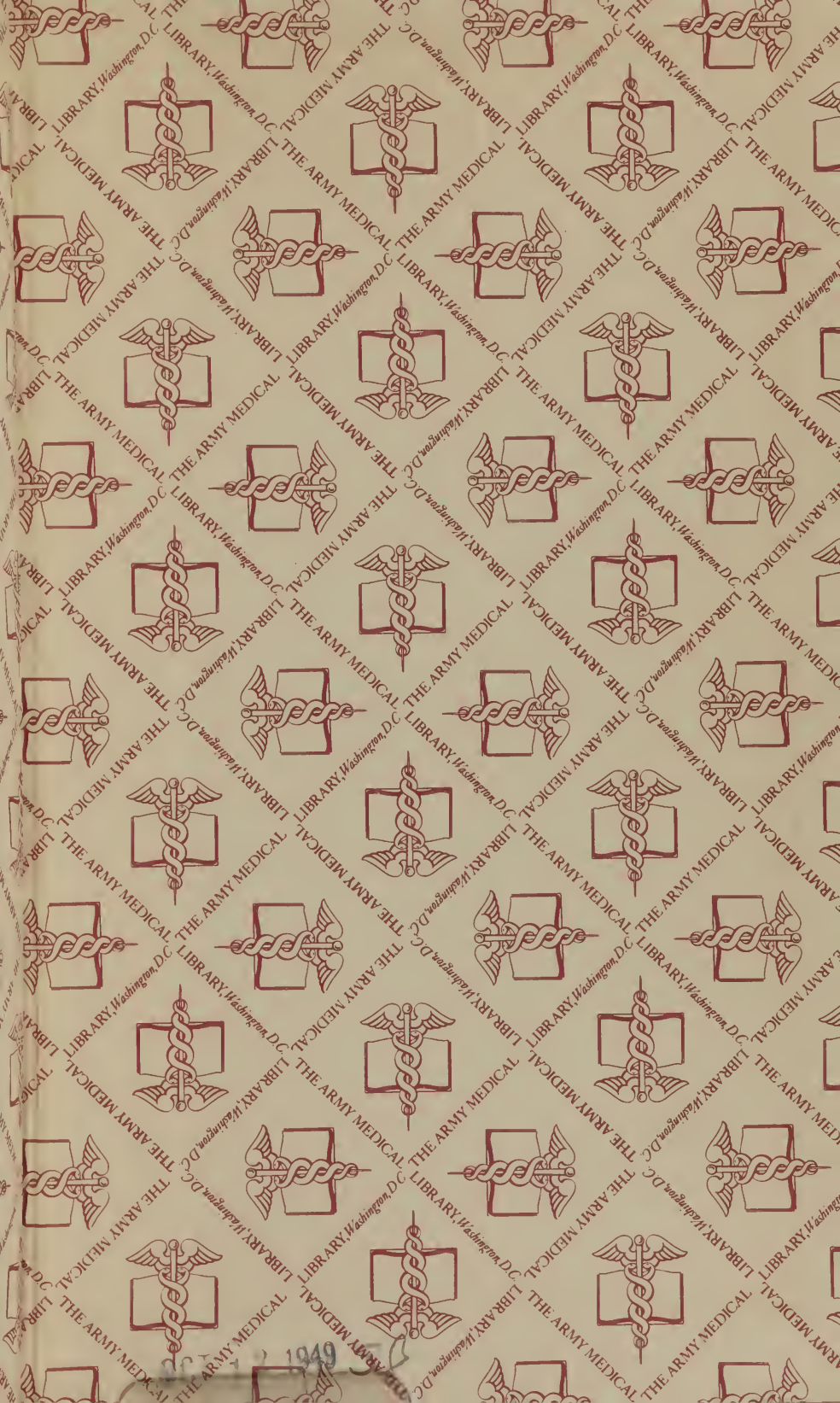
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